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97 Chesnut street, St. Louis, Mo.

TERMS: ONE DOLLAR PER ANNUM,
Invariably in Advance.

VOL. XIV. ST. LOUIS, MO., FEBRUARY, 1862. NO 2.

THE VALLEY FARMER,
AN AGRICULTURAL, HORTICULTURAL AND STOCK JOURNAL,
PUBLISHED ON THE FIRST OF EACH MONTH, AT
No. 97 Chesnut Street,
SAINT LOUIS, MO.

Terms (always in advance), 1 copy, one year, $1 00; 4 copies, $3 00; and any greater number at the same rate—only 75 cents per copy.

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Address, NORMAN J. COLMAN,
St. Louis, Mo.

Cotton in Illinois and Missouri.

We have no doubt that considerable Cotton will be raised in Illinois and Missouri the present year. Cotton has been and is quite extensively grown in the Southern part of Missouri at the present time. Before cotton goods became so cheap it was still more largely grown than at present. It has been shipped in quite large quantities from Cape Girardeau and all the river towns in S. E. Missouri—but not so much of late years. In the extreme Southern part of Missouri, however, it is one of the staple crops at the present time. We have no doubt that cotton can be successfully grown in Missouri anywhere south of the Missouri river; not so profitably, perhaps, as at the South, yet with sufficient profit to make it an object while the war continues.

Cotton can also be raised, and has been raised throughout the South half of Illinois.

A good deal of labor is required in handling the crop—preparing it for market, &c., but if the present war continues, and cotton commands high rates, we have no doubt that its cultivation can be made highly profitable; and as there have been some inquiries made of us both from Missouri and Illinois in regard to its culture, we shall from time to time give our readers such information as we possess and can gain that we think will prove valuable to them.

The present war must necessarily produce quite a revolution in farming. It costs more to send our corn to the Eastern cities than it is worth when it gets there. If put into pork at present prices, it does not pay. Wheat, oats, and all other produce is low. There is nothing inviting or promising at present prospects in putting out extensively any of the crops we have named.

Under these circumstances the intelligent farmer will carefully consider whether some crop or crops cannot be raised for which a greater demand exists, and which can be produced to a greater profit than corn, wheat, oats, pork, &c. There is no doubt that there is a great demand for cotton. Can it be raised in the Southern half of Illinois and Missouri successfully and profitably? From the testimony which has been brought before us, we have no doubt it can. A great many reliable persons have informed us that they have grown, with the best results, cotton in Illinois and Missouri. Gentlemen from South Carolina, Tennessee and other States, say that they have cultivated cotton in the Southern States and here also, and obtained as large a yield here. The testimony hereafter introduced also seems to establish this position.

We shall give full directions hereafter for preparing the soil, planting the seed, cultivating

the plants, picking, storing, ginning, and packing. In these times it behooves us to cultivate such crops as will bring the best returns, and those feeling disposed to plant cotton seed, we shall aid all in our power by giving reliable information upon its culture.

YIELD TO THE ACRE.

From the best information we can acquire, the average yield of the crop is from three hundred to five hundred pounds per acre. This amount also seems to have been raised in Illinois, as will appear from statements contained hereafter, which demonstrates that about the same quantity can be grown in Missouri or Illinois that can be in any of the Southern States. At the prices which cotton now brings, if the labor is not too great, it must prove far more remunerative than the staple farm crops.

COTTON AN EXHAUSTING CROP.

It must be borne in mind that cotton is an exhausting crop; that it cannot be grown continuously on the same ground without high manuring. It can come in as an alternate crop on the same ground once in four or five years, sowing clover as a fertilizer, to remain on the ground one or two years. Where well decomposed manure can be applied, it can be raised on the same ground every third year. We believe in a variety of crops, in a proper system of rotation, and if a proper system is pursued we shall not object to the introduction of cotton; but if it is to be raised in Missouri and Illinois as it has too often been raised in the cotton growing States, impoverishing the land, its further culture will prove a curse instead of a blessing.

The Illinois Central Railroad Company have been collecting testimony in regard to its culture in Illinois, and we append some of the statements made on the subject:

James L. Lamb, Esq., (Mather, Lamb & Co.,) resident now of Springfield, formerly resided at Randolph county in 1823, 1824 and 1825. Was storekeeper, used to purchase cotton of the farmers, and shipped it from Kaskaskia to Pittsburgh by the Ohio, generally 200 to 300 bales during the year. There were several gins worked by horse-power in the county.

M. F. Hackett. Lived in Sangamon county 1829 to 1841. Many of my neighbors at that time raised cotton every year. Elihu Bowen's gin, worked by horse-power, was generally resorted to, to gin the cotton. I never heard of any trouble by frost. It was raised as easily as corn. I have often seen it raised for first crop on new prairie sod.

W. Butler, State Treasurer, came to Illinois in 1824 with his father, who raised cotton annually for several years. Butler used to take the cotton to Bowen's gin, and names a dozen different neighbors who made cotton a part of their annual planting until the low price of manufactured goods drove homespun out of the market. Elihu Bowen's gin was located on Rock Creek, 16 miles west of Springfield.

In Fayette county, 12 miles from Vandalia, a cotton gin was in constant use between 1832 and 1836.

(LT. GOV. CASEY'S LETTER.)

Z. Casey emigrated to Jefferson county, Illinois, from middle Tennessee, in the year A. D. 1817: "I had been in the habit of raising all the cotton the family used prior to coming to this State. For twelve years after I came to Illinois, to-wit, from 1817 to 1829, we raised cotton every year sufficient for home consumption, and discontinued raising cotton there because cotton goods could be purchased cheaper in the stores than made at home. We used Tennessee Cotton seed. Planted usually about the first of May, and picked out during the month of September. Usually we had no trouble from frost.

"I have no doubt that cotton could be raised to advantage in all the south half of Illinois, every year. Z. CASEY.

Mt. Vernon, Jefferson Co. Ill.,
December 9th, 1861."

William D. Mitchell, aged 45 — post office, Ashley, Washington county—came from Tennessee in 1829—raised cotton for ten years—ceased to raise it because cotton goods could be bought cheaper. Used native seed—planted as early as the ground was in condition to work, and had no trouble from frost. The yield was quite uniform.

Isaac Ford, aged 38 years—post office, Osborn, Washington county—came from Missouri in 1835. Has raised cotton the two past years, 1860 and 1861—used native seed; planted 10th May and picked early in the fall. Had no trouble from frost. Thinks it can be raised as successfully and just as well as any other crop.

Zachariah Parish, aged 57—post office, Osborn, Washington county—came from Ohio in 1840—has raised cotton most every year since—used native seed, planted early in May and picked during the fall. Has raised on old and new land; does better on new land; had no trouble from frost.

Mrs. Wm. Finch—post office, Mt. Vernon, Jefferson county—came from Indiana—raised cotton for about twenty years before 1845, until cotton goods became cheaper. Used southern seed—planted as early as possible in May, and picked during the fall—had no trouble from frost—does better on new land. It is a sure and good crop, planted early in the spring on fresh turned sod, and requires no cultivation. Their average yield off of an acre and a quarter, after taking out the toll for ginning, was four hundred pounds—equal to a yield of over four hundred pounds to the acre.

Apollos Cooper, aged 60, came from Tennessee in 1860—post office, De Soto, Jackson county; raised cotton this year, planted first of May, cut off by the army worm; replanted the last day of May, and it was as good cotton as he ever saw grown in Tennessee; yielded at the

rate of from 1200 to 1600 lbs per acre of seed cotton.

Hardey Kruse, aged 43—post office De Soto, Jackson Co., native of Illinois; has raised cotton for the past twenty years; used native seed; planted first week in May and picked during September and October; had no trouble from frost.

Michael Taylor, aged 52—P. O. Du Quoin, Perry county, native of Illinois. Raised cotton for ten years—until spun thread could be bought cheaper than it could be made. Planted from first to tenth of May, and picked in September, had no trouble from frost.

Richard R. Taylor, aged 63, came from South Carolina in 1803. Raised cotton for thirty years after 1820; used native seed planted in May. Has raised as good cotton on Big Muddy, as he ever saw raised in Tennessee. Thinks it grows best in the timber. P. O. Du Quoin, Perry county.

Peter Hagler, aged 56—P. O. Du Quoin, Perry county—came from North Carolina in 1820; raised cotton for twenty years in Jackson and Perry counties, until cotton goods became so cheap it was unprofitable to raise it; used native seed; planted as near the first of May as possible, and picked from August to October; the frost would touch it occasionally, but not seriously.

Samuel Anderson, aged 55—P. O. Coloma, Washington county—came from Alabama in 1828; raised cotton for ten years until they felt able to buy their cotton yarn; used native seed; planted about the first of May, and picked from September to November; had no trouble from frost; does not think the lint is as good as it is in the South, but the crop will mature and do well here.

Allen Poage, of Homer, Illinois, aged 40 years, has raised more or less cotton every year for the ten years previous to 1845, and always had a good crop. His opinion is that the higher and more sandy the land, the better the crop as a general rule; but some of the largest and best cotton he ever raised was in "new breaking."

When the land was well fitted for the crop they used to plant it in drills, plants about 10 or 12 inches apart, cultivated it with a horse, and used a hoe among it; did not trim or prune it, and met with good success every year. If he can procure the seed, will plant fifteen acres next season.

How to Shovel Corn from a Wagon.—In unloading corn in the ear from a wagon, it is generally found necessary to take out a few basketfuls by hand before the shovel can be used to advantage. This difficulty may be easily overcome by placing a board, a few feet long, slanting from the bottom of the wagon to the top of the tailboard. Along this board the shovel can be used at once, and those who have never tried this simple plan will be astonished to find how much labor and time are saved by it.

The Mission of Agricultural Papers.

Farming is a science, and is becoming more and more such every day—till eventually it will be the chief science of the world, as it is already the most important, embracing many of the other sciences. And this science, like all others, must be taught, disseminated. This can only be done through the proper channels—schools, books, periodicals, lectures (public and private), and example. The latter is perhaps the most effectual way, providing always that the means of instruction be efficient. But this must, of necessity, in our present state of farming, be confined to isolated cases. This objection holds, in a measure, with respect to lectures, and also to books and schools. The great lever of the progress of the age, is the press; and in its popularity is its success. If not abused, this is the most effectual instructor. We are glad to see the farming community so well represented. But agricultural journalism is still in its infancy; though it keeps pace with the progress of the science, which is constantly stimulating it. This impetus will sustain it, as it is founded in the interest of the farmer. Besides, the journal embraces, more or less, all the other sources of instruction. It covers the whole field; reviews and comments upon books, and gives extracts; reports lectures; becomes teacher, even to the teacher, and the most welcome visitor at the college table; most of all, it reports practical experiments and discoveries. These are the gold sands of the journal, which it regularly and immediately serves out to its customers, fresh with every issue: for there is constant progress and development. And it is all brought to our doors, and for a mere pittance. And this is not its end; it remains with us, a library of constant reference.

But agricultural journalism is not well patronized. The reason is, its value is not immediately evident, tangible. It does not come with its profit wrapped up in so many bank bills. This profit is felt in the granary, in the market, on the farm; seen, perhaps, years hence: but generally little seen, if at all, in connection with the journal. Could this evil be remedied, the agricultural press would be established as a success. And it will come. But the journals themselves must be the principal means to bring it about, by introducing greater precision and integrity into their columns, which many now lack, and directing themselves more pointedly, more searchingly to the interests of the farmer: in a word, making the journal more efficient; for the

public mind must first be instructed, before it will know, and then it will be readily convinced. There are many such now; but they are among the intelligent readers; and they are rapidly augmenting. And it is the journal that educates them—the great lever of dependence. Deprive them of this, and they would be a rudderless ship. As well deprive them of their daily cup or meal; for this is their mental meal. And the greater the intelligence, the greater the dependence upon this source of instruction. Why is this so? Because they realize its benefit; they calculate it. And if not jingling out each week or month as the paper is unrolled, the cash finds its way eventually to the pocket, and the enlightenment to the brain, which, independently, is a gain.

We need not refer to farming, as practiced thirty or forty years ago, to convince the reader of the value of agricultural science, and of the journals that represent it; nor to the superior tillage of Europe over our own. This is evident; and is becoming more and more so every day. For light is scattered broadcast, and for a mere trifle—common as the light of the sun, and almost as cheap. And yet the agricultural journals are but sparsely distributed, when we consider the extent of the farming interest—the most extensive of human employments—the vital interest of the world, without which society would at once cease to exist. Why is this so? Why is the great majority of the farming community still ignorant—still damaging the earth, and disgracing agriculture? It is prejudice, based as it always is, on ignorance and a stubborn selfishness. Here is work for the journals—for the real disseminators of light, who do the work for the farmer. These should be encouraged. It is the spurious that are constantly in the way, reflecting a pernicious influence on laudable merit. And it is hard to get rid of the fungus growth, formed by the sham tricks of the day, in common with other spurious publications, and drawing their substance from the true journals. This is the greatest evil the agricultural press has to encounter. Were it not for this, their success would already be complete, and the farming interest advanced. There is no remedy, however. The croakers will always follow the singing birds, and divide their food with them. However, as light advances, their chance improves. The crisis of the country, whatever else its effect may be, will starve out these birds of ill omen; and leave the field comparatively fresh and clear. A better day is coming for agriculture. Its march is onward, and cannot be arrested. To arrest it is to arrest life itself in the same degree. The journal, the real instructor of the farmer, is as certain of success, as of bread. It must be limited, however, because the science is yet in its infancy. But eventually it will meet with patronage commensurate with the extensiveness of the farming interest. Its day is coming; it has already dawned. We have instances of comparative success—not purely agricultural, but mainly, and decidedly. As soon as the public become convinced of the utility, the almost absolute necessity, of an agricultural press, the day has arrived when the farmer's journal will be the peer of the newspaper.

CULTURE OF TOBACCO.

The high price which tobacco commands, and is likely to command for some time to come, has induced many of our readers to turn their attention to this crop, and we have had numerous requests to give what information we possessed on the culture of the crop. Many write us they are commencing its culture for the first time, and that they want full directions about preparing the seed-bed, sowing the seed, raising the plants, preparation of the soil for the crop, culture of the crop, priming and topping, suckering, cutting, curing, &c. It would take too much space to write upon all these topics for one number, and perhaps two, but we shall write upon these various branches of tobacco culture so as to be seasonable for the management of the crop.

SELECTION OF VARIETY.

The first thing to be attended to, is procuring the seed of the best variety for your particular soil and climate. There is as much difference in the varieties of tobacco as there is in the varieties of wheat, corn, oats, or other crops. Some varieties are earlier, some later, some with larger leaves, some with smaller, some tough, some tender, some good for manufacturing at home, and not good for shipping, and others good for shipping. There are varieties cultivated in New England successfully, not requiring so long a season for maturing. Among these the "Connecticut Seed-Leaf," we believe, stands first. In Virginia, the White Stem and Big Frederick are considered the best varieties for shipping purposes. Almost every neighborhood in Missouri and Kentucky has its favorite variety. Soil and location have so much to do with the success of the plant that we do not feel warranted in recommending any particular variety, but urge the importance of procuring seed of the best variety that can be obtained.

PREPARING THE SEED-BED.

After the seed is procured, the next thing is preparing the seed-bed, or beds, as there properly should be several of these, or one very large one, which will admit of seed being planted at various times during early spring. The object of this is to have a succession of plants, so that the planter can avail himself of those of the proper size for transplanting at the most opportune period for that object. One thing should be remembered, and that is, that there should be a large surplus of plants raised to meet any contingencies that may occur. Select a dry, warm, sheltered spot, on a southern or south-eastern slope, protected on the west and north by woods. The common method of preparing the bed is to burn the surface before planting. This is done by covering the surface with brush, logs, etc., and burning them when dry. They are piled loosely over the bed, so that the heat can extend downward, and destroy any seeds that may be in the ground. If the logs are laid flat on the ground, this object could not be so well accomplished. The condition of the soil is ameliorated and benefitted by the burning, and the ashes left upon the bed are of great advantage to it. Of course the bed should be cleared of stones, roots and all other improper objects. The bed should be made of fine tilth, and smoothly raked off ready for sowing the seed. "Two tablespoonsful of seed are recommended for one hundred square yards." We think this is too thin sowing. If the seed is all good, and could be evenly distributed over the ground, it would be enough. The seed is generally mixed with ashes or sand, and then sown over the bed one way and again crosswise. The bed is then tramped down and thickly covered with brush to protect the young plants from the cold, and frost and wind, and yet admitting the heat of the sun. As soon as the danger of frost is over, the brush is removed. The first bed should be sown early in February, and then at various times during the spring. The bed should be kept thoroughly clear of grass and weeds, and where the plants are crowding one another they should be "thinned out." The fly is some times troublesome to the plant-bed. When this is the case, sprinkle dry, fresh ashes, or fresh slaked lime over the leaves of the plant by hand This is as effective a remedy as we are acquainted with.

RAISING THE PLANTS UNDER GLASS.

It frequently happens that the young plants are all destroyed by frost, notwithstanding they are covered by brush. It is then sometimes too late to re-plant, and get a second growth of plants. To avoid any such result, it is far better to raise the plants in the modern gardeners' hot-bed. In this the plants grow rapidly, are not subject to being killed by the frost, and are always certain, if properly managed, to be of suitable size for transplanting at the first favorable season. Where they are planted under brush and killed, the second growth comes so late, that the season of planting is delayed perhaps several weeks, the young plants are overtaken by the drouth of summer or by the frost in fall, and thus the crop may be almost entirely lost; but when planted under glass no such contingency occurs.

In the February number of the *Valley Farmer* for 1860, we gave the directions for raising the plants under glass, and recommend our readers to follow this plan, if they conveniently can. It is as follows:

A rich loam is the best soil for a plant-bed. If not rich, it should be made so, by the application of old barn-yard compost (free from the seeds of weeds and grass), or a slight sprinkling of guano, well worked into the soil, some weeks before planting; or wood ashes, in moderate quantity. The ground should be thoroughly pulverized to the depth of the soil, and raked smooth and level, and before planting it should be firmly trod with the feet or pressed with a roller. The seed may be sown any time in March, at the rate of a gill of seed to five square yards of ground. It is well to mix the seed with one quart of Plaster of Paris, or ashes, which aids in its more equal distribution. Another thorough tramping will sufficiently press and cover the seed. The ground for the bed should be raised a few inches above the surrounding surface, with a slight southern inclination. This should be surrounded with a tight plank frame, raised say twelve inches high on the north or back side, and eight inches high on the front, and the top covered with glazed frames of any convenient size, as used by market gardeners. The earth should be kept moderately wet, and in hot days the sashes should be raised at one end for ventilation. Care should be taken, as the season advances, and the heat of the mid-day sun increases, to cover the glass with some open material to slightly break the more intense rays of the sun.

Farmers not accustomed to the management of hot-beds, while giving this method a trial, might continue a small bed on the old plan. But an acquaintance with the advantages of the former, would, we are confident, lead to its general adoption and add materially to the success of the crop.

Culture of Sorghum and Manufacture of Syrup.

ED. VALLEY FARMER: In answer to your request, I write for the *Valley Farmer* some directions for the culture of Sorghum, and manufacture of syrup from it. I would say, that having but one season's experience in the manufacture, I have much to learn; still, as I might say something that would help a beginner, I will try.

Planting should be done as early as possible to escape frost. Soaking the seed a day or two in tepid water will hasten growth. The ground should be prepared as for corn—clean, fertile, deeply plowed, finely harrowed—and planted four feet apart, each way. Some plant in drills and plant thicker, but I think the above distance apart, with three or four stalks in a hill, gives the most sizable stalks, and facilitates culture by plowing both ways.

When it first comes up, it resembles coarse grass, or broom corn, and as it is slow to start, and during the first month of slow growth, if the ground was foul, the cost of cultivation would be much increased. When fairly started, the growth is more rapid than corn, and no crop pays better for clean and deep culture. It should in no case be cut till the seed is *fully ripe*, or the syrup will have a green taste.

To strip off the leaves, a week or ten days before cutting, seems advantageous; and when cut, take off three or four feet of the top or greenest part of the stalk.

The juice matures first in the *lowest* joints, and generally makes the best syrup.

Wooden mills are much used, but do their work imperfectly, and at great cost of labor. Use a two-horse, cast-iron, vertical mill, which should be set on a level spot, near where the ground descends four or five feet in two rods; at the bottom of the descent, two rods from the mill, build the arch for the boiler so that a two-inch lead pipe may be used to carry the juice from the tub, at the mill, to the tank over the boiler. Make a box or tank four by six feet, and ten inches high, which will hold five barrels or more. Boards but tolerably jointed will not leak if list or strips of cloth are put in the joints. A faucet from the tank to the boiler will be handy also. A molasses gate from the lower end of the boiler to the cooler, and one from the cooler to the barrel—which cooler may be made of boards, six inches high, with a common sheet iron bottom, and two by four feet in size. A convenient and cheap boiler may be made by nailing (with no. 12 tacks or three-penny nails) sheet iron or copper on to a box of boards six inches high; galvanized sheet iron may be got for a small advance above common sheet iron, but copper is better than either, and cheaper in the end. This boiler, say four feet wide and nine feet long, rightly constructed and set on a good arch, will evaporate the juice as fast as a two-horse mill will grind it. With such a mill and boiler, we have made sixty gallons of good syrup in one day.

We sold four barrels of said syrup to David Nicholson, a wholesale grocer in Saint Louis, for forty cents a gallon. He pronounced it by far the best he had seen. It closely resembles golden syrup. Said syrup was made from the Sorghum juice, without any material whatever being put in to cleanse it. The only cleansing process is done with the skimmer. It must be skimmed *all the time*. The skimmer is made of perforated tin, and costs 50 cents.

To make a first rate article the cane must be fully ripe. The best syrup we made this season, was from a patch of cane on which the seed had been black fully six weeks. The syrup from green cane *will* have a green taste, and after being frozen it has been much darker, without any other perceptible difference.

Cuba, Mo., Jan. 5th, 1862. B. SMITH.

SHOCK FODDER.

ED. VALLEY FARMER:—Fodder is excellent feed, if put up in good order and then fed under favorable circumstances. From several years' experience, I venture a few suggestions:

Cut before the frost has nipped the blades, and put up in shocks from 12 to 15 hills square. Where large quantities are put up in this way it is well to plant an occasional row of broom corn through the field, to use as bands for tying the shocks. Latterly I have made it my practice to feed all my fodder (using but little other roughness) in the beginning and middle of winter. In the coldest weather my stock eat it finely, but after the warm days of spring commence they seem to lose their appetite for it. My chief trouble in using shock fodder has been that I am frequently compelled to handle it when *too dry*, and consequently get it wasted. An equal vexation sometimes occurs by having to use it after a rain and sudden freeze, when it will be found completely matted together.

In hauling, I sometimes find it convenient to put two extra horses to the wagon, and hitch a sled, close up, behind it. Drive close to the shocks. Husk and throw the corn into the

wagon, and pile the fodder upon the sled. If the ground is frozen and there is a little snow, this answers very well. Where it is desirable to haul the shocks before husking, it is a good plan to drive close with a sled, and after loosening the stalks from the ground, pass a rope around the shock, and with a strong pull tilt it it over upon the sled. Three shocks (the tops of two of them one way and the other reversed) will make a pretty fair load. Two men can throw almost any shock in this way without tearing it to pieces; and where advantage can be taken of the ground, to pull down hill, one man can do it. The less handling the better. Large quantities, after husking, may be put up in long ricks having a pole in the centre to stack against. I press the tops together by using long poles on each side the rick, propped against it with forks long enough to reach within three feet of the top.

In feeding, I prefer large (wide) mangers, however rudely constructed, in preference to racks or any other method that I have ever used or seen.

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[Written for the Valley Farmer.]

MAPLE SUGAR.

One of the best and most delicious of our native sweets, is maple sugar. Its manufacture in many portions of the country, has of late years been neglected, owing to the cheapness of cane sugar. Now, when sugar is worth from twelve to fifteen cents a pound, with a prospect of its being higher, every farmer who has within convenient distance twenty-five to one hundred or more sugar maple trees, should immediately make preparations to tap them and make all the sugar and syrup that he can. Each tree will yield from two to four pounds of sugar, according to the season, besides some molasses, which may be made in the last of the run, when it will not granulate.

At the present prices of sugar, most farmers can well afford to make it from the maple trees, and especially so when they have not the money to buy with. Nearly all farmers in these times are better supplied with almost every other necessary for comfort than money, and in the absence or scarcity of money it will be very agreeable to have the sugar on hand with which to sweeten our strawberries and cream and our coffee (?), even though the latter be made of barley or rye.

The process of making maple sugar is undoubtedly familiar to most farmers. The first requisite is good clean vessels in which to catch the sap or sugar water. Good troughs can be easily made with no other tool than the common chopping axe, of any easily wrought wood, as the Linn or Basswood, Ash, and Poplar. The auger is the best tool to tap with. It is quite unnecessary to cut a large gash in the tree as is often practiced. It has been found by experiment that as much sap will run from a half inch auger hole as from a larger one. As good a plan as any probably, is to use an inch or three-quarter-inch auger, and bore a hole, not exceeding two inches in depth, slanting downward so as to hold the sap. Then with a half inch auger bore another hole below, slanting upwards so as to meet the bottom of the large one. Into this last insert a tube of elder or sumach to convey the sap to the trough. The sap when collected should be immediately boiled down in clean kettles or a suitable evaporator, taking care to skim off all the scum that arises to the surface in boiling. When boiled down to the consistence of thin syrup, it should be removed from the fire, cooled and strained through flannel. To clarify it, use say to five gallons of syrup, the whites of three eggs well beaten, mixed with a pint of new milk and half a teaspoonful of saleratus. This should be well mixed with the syrup while cool, which should then be gradually heated and carefully skimmed. In boiling the syrup down to sugar great care is necessary to prevent burning. If much burned it will not make sugar, and the least burning injures the quality. A plan should be contrived by which the kettle may be readily swung off if the fire becomes too hot.

Cook's Portable Evaporators are excellent for boiling down sugar water, and it is said will boil down two to four barrels an hour according to size. If so, it is more than twice as fast as it can be done in kettles.

For those having large maple groves or who intend also to cultivate Chinese sugar cane, it will be economy to purchase one of these evaporators.

M.

How to Become a Marksman.—A Maryland writer asserts that twenty years' experience and observation have taught him that any person may become a good shot by observing the following directions:

Allow the rifle to hang in the hands in an easy manner, decline at an angle of about forty degrees; then raise it steadily but quickly in a line with the object, the eye ranging carefully over the sights, and at the instant the object aimed at is covered, touch the trigger. He says: "I find there is a moment in which the gun is absolutely still—that is, the instant the upward

movement of it is arrested. These directions observed will certainly make a good shot. If the sight is lost at the first, it can be recovered by a second. Any deviation from this rule is fatal to accuracy.

Sugar and Syrup Evaporators.

A good deal of interest will be felt by those growing Sorghum, the present year, in regard to the best Evaporator. Heretofore Cook's Evaporator has been considered the best. It was undoubtedly the first successful Evaporator. But American ingenuity is sleepless as well as wonderful, and Cook must look sharp or his laurels will be wrested from him.

We notice that A. H. Miller's Rotary Alternating Evaporator is highly spoken of. The *Rockford Register* says that Mr. Foster, of East Rockford, Ills., has been engaged in manufacturing syrup ever since Sorghum was introduced, and last year used Cook's Evaporator, but this year disposed of it and is using Miller's, and pronounces it far superior to Cook's. He says since trying Miller's he would not use Cook's if it were given him.

J. & L. Gill, of Columbus, Ohio, we believe, are manufacturing another Evaporator, for which they claim peculiar merits. There are also other inventions. We are anxious to learn which is really the best, so that we can enlighten our readers before it is time to purchase.

OSAGE ORANGE FENCES.

Ed. Valley Farmer: In compliance with your request I proceed to answer, briefly, the interrogatories of your correspondent, Mr. H. C. Lackland, in relation to the value and efficiency of hedge fencing. Without repeating the questions in their order, it is hoped a satisfactory answer to most of them will be found in the substance of the following brief remarks:

The result of the numerous experiments with the Osage Orange, up to the 43d parallel, may be set down in the following classification: A few *good hedges;* many poor hedges, that are yet sufficient fences; and not a few entire failures, that only amount to a nuisance on the farm.—The status of this latter class has been reached almost invariably by "bad luck"—alias neglect—alias abuse.

Experience has amply demonstrated that the Osage Orange will make a fence quite as efficient as a stone wall, and at a cost comparatively trifling. The average time required to complete it, if proper management is had, may be put down at four years; though it is sometimes made to turn stock at three seasons' growth.

The cost per mile will vary according to circumstances, but it may perhaps be inferred from the following data: Present cost of plants $2.50 per 1000; at 4 inches apart, 16,000 for a mile of hedge-row, $40; cost of preparing the ground and setting in the plants, say $10; total, $50. Cultivation of the hedge-row for three years, about the same as a row of corn or potatoes should have. If to be cut down but once (at two years old), the cost will be merely nominal. If re-planting be necessary, it will of course increase the cost in proportion to the amount required.

From the foregoing estimate may be deduced the inference that it will not only make the BEST but also the CHEAPEST fence in the world—yet only upon the absolute condition that everything is done *right.*

Hedges may be successfully grown on the open prairie where but little stock runs at large, but where many animals range, it will be found useless to attempt it, for the young plants will be almost certain to be trodden out and destroyed the first and second years. Much might be said on the best method of treating, rearing and trimming the hedge; but it may all be summed up in a few words: *Use only good plants, in perfect order, set closely, evenly, deeply, and by all means carefully*—allow no necessity for re-planting—cultivate well till midsummer for three years. At two years' growth, cut the row down even with the surface. Where a screen is wanted, and the "view" can be dispensed with, if the row is sufficiently thick at the base, the future trimming may be wholly omitted, and in a few years it will form an admirable wind-break, as well as a most efficient fence—a most important desideratum around the orchard, the barn-yard, the pasture, the stock farm, and in fact on all large prairie farms; but along road sides it must be kept shorn down, for reasons obvious to all. This is not a heavy job, if it has to be done even by hand with a "hedge slasher;" but machinery for hedge shearing by horse power is now being perfected. The finished hedge, clipped in proper form, will describe two sides of a prism. It is easier and better to clip twice in each season—in early spring and at midsummer.

C. R. Overman.

Bloomington, Ill., Jan., 1862.

Sweet Potato Coffee.—Our friend, J. Brown, of Washington County, Illinois, informs us that he has partaken of sweet potato coffee prepared in the following manner, which he prefers to Java coffee. Pare the sweet potatoes, slice them, and then cut in small pieces, put on a dish in the oven, dry, and parch the potatoes until they become crisp, but do not burn them; prepare precisely as coffee is prepared. But little sweetening will be required.

[Written for the Valley Farmer.]

Our Agricultural Products Affected by Present Events—Necessity of a Change.

BY WILLIAM MUIR.

There are times and events in the history of individuals and nations that are marked by a sudden change or revulsion which alters the direction of their ideas and changes every feature of their existence; and sometimes the most severely felt trial has in the end been found a "blessing in disguise." So may it be with us, 'though the present is hard to bear.

In our State, at this time, the necessity of change in the character of our agricultural products, stands forth in the light of a great fact—and the folly of *depending exclusively upon any one staple*, however profitable it may be at a given time, is patent as another great fact. Circumstances indicate that we must, for the present at least, change our staple products. An unlooked-for event has thrown upon our hands a large crop of wheat, corn and pork, and has almost deprived us of cotton, rice and sugar; and at least till affairs change, we must reduce the stock of the articles of the first class, and endeavor to create a domestic supply of those of the second class. Fortunately for us, our State has the natural advantages for doing this almost to any extent—and without adverting to any of the political features of the present state of affairs, we are constrained to suggest the propriety of curtailing the extent of our wheat, corn and pork growing, and turn the acres into the growth of sugar, rice, flax and wool.

THE SORGHUM PLANT,

Takes the place of the Sugar Cane of the South as a sugar-producing plant, and is grown with as much ease and certainty in our State as corn, and produces an excellent syrup and a very fair sugar. We have before us a sample of beautifully crystallized sugar, and have, during the last three years, used some excellent home-made syrup; and this last fall had some plums preserved in this home-made syrup, which were two years old and in fine condition and the syrup crystallized on the fruit.

The Imphee, or African variety, is found to granulate much better than the Sorgho or Chinese variety; and this, cultivated in almost every respect as corn, has been found to give from 200 to 250 gallons of clarified syrup per acre.—A simple crusher may be made of wood, and the juice boiled down in a clean kettle, with good results; but we would suggest that clubs be formed, and a good power crusher and a properly made evaporator be obtained and operated as a joint stock concern for the first season. If these were located at some public, central place, in each neighborhood, as the grist mill, for instance, and the culture given a start, it would soon become apparent at what rate per gallon it could be manufactured, and toll could be taken as at the grist mills, and it would soon be found an important adjunct to the saw and grist mills of every locality.

This is a subject that should be immediately taken up in every neighborhood, for if these appliances can be obtained, it will do much to induce persons to go into the culture of this crop the next season. We find it stated that one county alone in Illinois has produced 2,500 barrels of first-class syrup, worth $35,000.

The seed is fattening for stock and poultry, and relished by them. When hulled, it is excellent in the place of rice or of grits. Hulled and ground, it makes excellent puddings or blanc-mange—and we know families that have used it for a great length of time browned as a substitute for coffee.

UPLAND RICE,

Is an article that should receive an enlarged share of the attention of the agriculturist as an easily cultivated and highly valuable article of diet. We know of a very successful experiment with it in a neighboring county, and the want of a hulling mill was made up by scalding the grains in a wash kettle and drying them in the sun. When quite dry, the husk split off, and the chaff could then be fanned out—the rice forming an excellent article of diet.

FLAX.

If we must want cotton, we *can* raise flax as a most durable substitute. Our soil and climate are well adapted to its culture. We have streams in abundance, if we wish to water-rot it, and fine sun and air to dry and clean it. From 200 to 400 lbs of fibre, and from 6 to 8 bushels of seed can be obtained from an acre. About two bushels are required to seed an acre. It should be sold at once to the flax dresser, but can be prepared by machinery like wool, or by hand in the family, for sewing, as linen, or made up as the ever-to-be-remembered *Linsey-Woolsey* of the days gone by, of which the fashionable linsey or rather *flimsey* of the stores is but a shadow or a dream.

WOOL,

Is, or rather should be, another of our widely cultivated staples; one, that the changing climate of our State renders eminently needful; one that our hills and dales seem calculated to produce in abundance; one, that can find a ready

home or foreign market; one of the most certain and profitable crops we can find; and one that would cause the extensive introduction of a most valuable addition to our dietary list, that of *mutton*, a much more healthy and nutritious article than pork. *It is a shame that so much money has to leave our State for woolen goods, when our State is equal to any and superior to most for its production and manufacture.*

If our present calamities will impress our minds with the importance of the hints here thrown out, it will largely compensate for the pecuniary losses we are sustaining. If not, they will, it is to be feared, be lost upon us.

In conclusion, we need only say, that the exigencies of the times are such that no one can afford to be ignorant of the circumstances that surround him. In these times every man must be *posted* as to how he can save a dime—or make two cornstalks grow where only one grew last year. Our people cannot afford to pay for information adapted to other lands and other climes. Therefore, it is important that he gets one good, substantial, reliable agricultural journal: and Missouri boasts of one, and only one, in these hours of trial and of need. Let the people stand by this one journal, and it will stand by them. No man spends a dollar upon it, but we pledge ourselves gets five dollars in return through it. Its province is to benefit the farmer and to increase the productive capabilities of our State.

Osage Orange Premium Hedge.

The following is the statement of Mr. C. Barton, of Tazewell Co. Ills., in regard to the treatment of his Osage Orange hedge, on which he received the first premium. He says: In the year 1858 I purchased hedge plants to the amount of ten dollars, which I set out, making one hundred rods of hedge. The first year the setting and cultivating cost me six dollars; the second year cultivating and trimming cost me two dollars; the third year trimming two dollars.

Preparing Ground and Setting—I plowed a large strip of land on the side of the field on which I set my hedge, so I had neither the ridge nor the dead furrow for my hedge-row, but level ground; then with a common plow I made a furrow in which I set my hedge, placing the plants about four inches apart, and covered the ground so as to leave it perfectly level.

Cultivating—I took a double shovel plow, and as often as the weeds sprang up, or the ground become baked, I plowed it up, keeping the ground level.

Trimming—I did no trimming the first year. The second year I trimmed once, which I did about the first of April, cutting the hedge about three inches above the ground. The third year I trimmed twice; first, about the first of April, cutting the hedge about one foot from the ground. Second, the first of July, cutting about three feet above the ground; after which my hedge has been completely adequate to turn all kinds of stock. Of the hedge the Committee say: We do hereby certify that the above-named hedge has been well cultivated, that it is a good substantial fence, and that it is worthy of a premium from our County Agricultural Society.

Distance of Planting Sorghum.

It is quite important to know the proper distance at which Sorghum should be planted. Some recommend planting in hills, others in drills. Our opinion is that more syrup would be obtained, and of just as good a quality, by planting in drills, not having the plants crowded, but giving each plant sufficient room for a free and full development.

Mr. D. S. Pardee, a successful cultivator, thus speaks in the *Prairie Farmer*, on this subject. He says: "I would plant the cane four feet one way; and instead of three the other way, as thick as it would be convenient to till. By growing it thick in the row we get a more uniform growth, which is very essential in working it up."

ADAMS' EXPRESS LINE.

BY UNCLE JAKE.

Mr. Editur—As you hev axed me to help support your paper by kontributin my thots and experienses which you air kind enuf to say you will put in print I send you this to deel with as you may see fit. Now this eare is so'thin new to me howsome—still, as you request it I have desired to try my hand. From the heddin of my pece you mought be led to konjecture that I was goin to discours upon the wonders of the gigantic magnetic tallowgraft; or the wonderful felicity by which goods is transported thro the country by the expres companys. But this is not so. I purpose to rite a simple narratif of truth; trasing the line of naturel desent, geonology & pedigree belonging to won of Adams fallen creeturs down to the present time. So that we may be benefitted by what they seed and what they done, but if we wish to avoid the rock on which they split we must avoid thare errors. The grate Patrick Henry onc't remarked that Rome had her Seizure, France

her Bonyheart & George the third mought look out, leastwise he mought git hurt tu. (N. B. By George the III. I meen your reedurs.) But to begin my narrative. I shal not go back as far as fauther Adam. The geonology which was rit out and preserved as a family memento was supposed to be lost comin over the grate deep & as I was not ther & konsequently not bein fermilier with the circumstances I disremember havin it verbatum in me hed. Sufis it to say that Jacob Dawson (my grate grandfather) lived at about the time of the Plymouth rok. He had a strong konstitution & a muskular frame. My grandfather used to say that the old man was looked up to smartly them dase. Tradishun sez, he felled the mitey forest, chased the wild dere, the barr & the feroshious injun with the same cool bravery as my boys now hunts possums on a moonlite nite. They had hard scratchen them dase Jacob Dawson had. Ther was no convenienses & folks fared ruf. I will not go into detale because I hev no idee that we shall ever have to go thru the likes agin, & a'tho the story mite be interestin to your reedurs it mought not be profitabul to consoom the spase. It was agricultur you wished me to rite about & as they had none hardly them dase, leastwise no improvements I will pass on simply sayen that old grate grandfather Dawson was not killed by the Injuns as some suppose but dide at home & was berried decent. In the dase of grandfather Dawson whos name was Jacob tu, folks begin to open farms pretty smart & maken a rite komfortable liven. He clared the land and planted the virgun sile: produsedmost of the needful artikles of life & seed a purty good time generally. This howsome-ever was after he had sarved a rite smart time in the wars of the revolution & pece was made with the muther country. My father was named Jacob too. He was the youngest son & grandfather left him the hum place. (It seems a little curious that the youngest boy is generally named for his daddy & allers gits the hum plase.) This is the reson why I hev been tracen the line of desent by the youngest ones & sed nuthin as yit about the other children. I must say tu that grandfather rased his boys rite. He made em to the twig & walk strate but as thare was a heap to do he couldent give em much eddication. Finally he dide after liven to see his children mostly settled around him: with my father as I sed befor on the hum plase. I worked hard from my boyhood up and I lerned to do presisely jist as daddy done. I thote he was the stoutest man & the smartest man & the richest man & the knowenest man I had ever sede & konsequently I tried hard to foller his customs. Arter I was growne my father tuck a trip down into Kanetucky & he liked the contry so well that he concluded he must pull up stakes & leve. The sile was gitten a good dele worne whar we lived in Virginney & as he could sell purty well all hands conkluded we must try emmigration. The people was a good dele rowdyish down thar & some of them was a leetle shy of daddy caise they thot he was so strict. They liked him however & used to say (the better part of em did) that ef he *did* belong to meetin it diddent hurt him. In du proces of time he was elected Justis of the pece and then's when he begun to make em walk chalk. [To be continued.]

To Cure Sheep Skins with the Wool On.—Sheep skins, properly cured, are valuable and serviceable on the farm. Clark Sellers, in the *Prairie Farmer*, says, the best method to cure them is to take one tablespoonful of alum and two of saltpetre; pulverize well and mix together thoroughly. Sprinkle this powder on the flesh side of the skin, and fold together with the wool out; hang up in a cool place. In two or three days—as soon as dry—take down and scrape the flesh side with a blunt-edged knife till clean. This completes the process. Such skins make excellent saddle covers.

Time for Cutting Timber.—We have been long satisfied, says the *Country Gentleman*, that the best time to cut timber is in summer, if it is not left in the log, but is immediately worked up into boards, rails, or whatever is intended. It dries rapidly, and becomes hard and sound. Cut and saw basswood in summer, and in a few weeks it will become thoroughly seasoned, and will finally harden so as to almost resemble horn. Cut it in winter, and it will be so long in seasoning as to become partly decayed before the process can be completed. No doubt the presence of the water or sap in great abundance in winter, and especially towards the latter part, hastens this incipient decay. Rails cut and split in summer, and the bark peeled to hasten drying, have lasted twice as long as winter cut rails. A correspondent of the *New England Farmer* says he cut and split a chesnut tree early in summer, and "it dried the best and brightest wood he ever cut." It is the practice to cut nearly all timber in the comparative leisure of winter; but there is no doubt that it would be better to pay a higher price to have it done in summer. We would especially invite observation and attention to the subject.

BOILED CORN FOR HOGS.

A correspondent of the *Cincinnati Gazette*, who has been fattening his hogs on boiled corn, says: "I fed 16 hogs but little more than half the time usually considered necessary to fatten them, and about half the quantity of corn. Of these hogs two were fully grown, and were well fatted, but not so much as hogs fed three months with as much corn as they will eat. The other hogs were not grown, and were not as fat as these two, but were excellent pork, and made a rapid increase in weight during the time I fed them. I am the more confirmed in the opinion that boiling corn on the ear is a saving of at least one-third, and perhaps as much as one-half, but not more. This was from thirty to fifty per cent., but according to Mr. Clay's experiment, the saving is nearly three hundred per cent." He further says Mr. Clay's experiment must from some cause be very incorrect.

We do not think the writer is competent from his experiment to call in question the carefully tried experiment of Samuel H. Clay, of Kentucky. His hogs were weighed on scales at regular periods throughout the experiment—all of them—and were fed on dry corn, boiled corn, and boiled corn meal. The amount fed to each pen was likewise carefully weighed. There was no chance for mistake. The *Gazette* correspondent did not weigh his hogs, nor his feed. He did not try the comparative merits of dry corn with boiled corn, or boiled corn meal. He did not know how much corn he fed to his hogs, or what they gained on the amount consumed. It was all guess work. And upon this mere guess work he calls in question one of the most carefully conducted experiments on record. Let the gentleman before he goes to this length, try the experiment as Mr. Clay did, with the sole object of learning which is the most profitable way of feeding corn to hogs, and if his experiment differs from Mr. Clay's then let him say so; but not condemn without trial or upon guess work evidence.

But we think the gentleman admits away his case. He says: "I fed 16 hogs but little more than half the time usually considered necessary to fatten them, and about half the quantity of corn," which we take to mean half the quantity while being fed, and on account of being fed on boiled corn. We know from our own experience, for we feed our hogs boiled corn altogether, that they do not consume more than half the number of bushels of corn, in any given time, when thoroughly boiled, soft and swollen, that they do when the corn is hard and dry. They cannot eat more than half of the quantity in its soft and enlarged state, nor do they require or desire it—keeping out of the question the vast amount of more good the boiled corn must do them.

Now let us take the gentleman as we understand him. We will say he is in the habit of feeding his sixteen hogs, or any larger number, for four months, and that he feeds them four hundred bushels of dry corn in those four months. But by boiling the corn, it is necessary to feed them only about half the usual length of time, which is two months, in which time, if fed on dry corn, they would consume only half the quantity, which is two hundred bushels. But the corn being boiled, they only require half as much in the same time as they would if it was dry, and half of the two hundred bushels would be one hundred bushels—so, by feeding on boiled corn, instead of dry, by his own statements, he has saved three hundred bushels of corn, or made three hundred per cent. So, instead of condemning Mr. Clay's experiment, he ought to approve it. His own experiment fully confirms it by his own admissions.

A MODEL MILK COW.

Ed. Valley Farmer: A model cow should be gentle and docile to milk; give a good *quantity* of milk; give rich milk; not go dry too long; an easy animal to feed; should drink greasy slops; her milk easy to draw from the teats; and be quiet and peaceable in the barnyard.

If a cow is vicious and bad to milk she can have no *redeeming qualities*. A large quantity of milk, and very rich, are two qualities which *sometimes* (though not very frequently) go together. The value of each depends upon the uses they are applied to. One for butter, the other for cheese. If a cow has all the above, and goes dry half the year it detracts materially from her value; hence I put milking a long

time, with the qualities of the first importance.

We come next to the secondary considerations. To be a small feeder is a desirable quality in any animal; to drink all kinds of slop is an important item. The milk to be easy drawn from the teats is quite an advantage to the milk-maid; and for the cow to be peaceable in the yard makes it much more agreeable for herself and all concerned. I must say however that I have never seen *all* these combined in one animal.

If a cow gives a great deal of milk and very rich, she must have good feeding to make it; and if you prize good butter, rich milk and cheese, as I do, you will *see to it* that she gets it. It is by no means uncommon for a good cow to be *hard* to milk. If the first four qualities named are right, I can put up with some falling off in the remaining ones. I have a cow in my possession now—and I think her something extra—that has all the above mentioned good qualities, except that it takes considerable to keep her. Her mother and grandmother have never been dry since their first calving; the latter lived to be fifteen; and in their milking qualities otherwise they are all *three* superior. From this time until grass is the most critical time in the whole year with milk cows. If you would bring them out in good condition in spring, feed plentifully; let them have plenty of good water, and a comfortable shelter. It will pay well. * * * *

[Written for the Valley Farmer.]

SHEEP—A SUGGESTION.

At various times within the past few years, have been set forth in the *Valley Farmer*, the profits of sheep raising for wool or mutton, or both, as well as the superior adaptation of large portions of Missouri, Illinois, &c., in climate, soil and productions for the business.

Comparatively few within the circle of my observation have been induced to embark systematically, or to any great extent, in this most important and remunerative branch of husbandry, either from want of experience or taste for the business, or, what is more probable, because of a shyness of "new projects," and a reluctance, very common, to depart from the old routine of farming to which they have been long accustomed.

At the present time, I venture to suggest that there are several circumstances which strongly indicate to farmers the propriety of engaging to considerable extent in the business of raising sheep. These circumstances are, first and chiefly, the scarcity of help. Large numbers from nearly every part of the country have gone to the wars, and generally those have gone who were most to be depended upon for farm labor. It is scarcely reasonable to expect any change for the better in this respect very soon, and the difficulty may be much increased. Where slave labor is principally depended upon, the case is very little different. It is true that slaves have been hired out the present year at much lower figures than formerly, yet there are circumstances, of which it is unnecessary to make particular mention, which have rendered this species of help less abundant and less reliable than at any time previously. This difficulty seems much more likely to be increased than diminished in the future. There is every probability, then, that there will be a scarcity of farm help in the West for years to come possibly much greater than we anticipate.

Under these circumstances it is important to consider what branches of farming may be pursued most profitably with the least help. It appears to me that sheep raising is just the branch which most fully meets the indication. Sheep bring in to the farmer a quick, sure, and excellent return, and in our mild climate especially, may be kept in large numbers with very little help. They will winter over on good blue-grass pasture with the help of a few oats, or in the absence of blue-grass, rye may be sown which will answer the purpose for pasture just as well, if not better. Sow the corn-fields with rye on the first of August, and it will make excellent sheep pasture from the time the corn is taken off to June following, and then a heavy coat of rye may be plowed under for a succeeding crop.

Another valuable consideration about sheep is, that besides yielding the money to pay our taxes, they will also keep our land rich. Land that is devoted to sheep will not be worn out.

Allenton, Mo., Jan. 19th L. D. MORSE.

Cure for Scratches.

ED. VALLEY FARMER: Sometime last year, I noticed in the *Valley Farmer*, a cure for Scratches in horses (the use of lime) which the writer said he had never known to fail.

Permit me to say that I *have seen* lime fail in different instances, and also permit me to recommend a cure which I have *never known* to fail, and which is much easier used than the lime: First, wash the parts affected with soap suds. Then apply a mixture consisting of gunpowder, spts. turpentine and hog's lard, in as nearly equal portions as they will mix well together. Apply twice a day, and unless in very severe cases two days will effect a cure. ****

[Communicated for the Valley Farmer.]

BIG-HEAD AND BIG-JAW.

BY GEO. H. DADD, VETERINARY SURGEON.

[Concluded.]

Name of the Disease.—Big-head and big-jaw, are terms sufficiently explicit in ordinary conversation, among horse owners, but for the purposes of scientific inquiry, it is necessary to apply terms indicative of the pathology of the disease; we cannot expect, however, to select any one name that shall apply to all the pathological conditions, during the rise, progress, and termination of this malady. Hence I shall endeavor to name the disease, according to its principal features, in plain English. I shall call it enlargement, softening, and degeneration of bones. My medical friends can easily render these terms into professional technicalities.

Cause of the Disease.—I have already hinted that this disease owes its origin at the present time to hereditary predisposition; otherwise I cannot account for its prevalence over so wide an extent of territory as it now occupies, and under such diverse modes of feeding and general management. I grant that at first the disease might have had an accidental or spontaneous origin, and such cases may now occur; yet a disease of spontaneous origin may finally become contagious, permanent and transmissible; for example, glanders and small pox afford illustrations of spontaneous diseases becoming contagious. There was a time when neither of these diseases existed, hence the subjects of the same could not have taken them by infection nor contagion, and as regards *permanency* and *transmissibility* of size, form, faults, defects and beauty of form, I need only appeal to the intelligent husbandman for proof satisfactory.

I do not pretend to argue that the disease itself is always transmissible, for in some cases, the conditions favorable for its propagation may not be present in the system of the exposed animal during the period of the act of impregnation; yet a predisposition to the malady may be transmitted. Then the ordinary exciting causes which derange the nutritive functions of the body, may ignite the latent affection and unmark that which otherwise might not have had existence. The nutritive function of the body is deranged by excessive or defective labors, yet, in the present state of our knowledge, it is difficult and perhaps impossible to determine positively where the altered action is and on what it depends.

Prof. Varnell has made a careful examination of two horses, the subjects of big-head, and the following are some of the most permanent features of other parts than the head:

"The structural changes that had taken place in the organs of both were so much alike that the description I am about to give of one will equally apply to both. The soft parts generally were paler than is natural, especially the muscles of those limbs which had been thrown out of use from the pain produced whenever any movement was attempted to be made. But in these structures I did not detect the slightest tendency to fatty degeneration. The fat generally had a mottled, watery appearance, which is very common in animals that are rapidly losing flesh, and this had been the case in a very marked degree with these, for a short time before they were destroyed.

"In disarticulating the limbs from the trunk, and also several bones of each limb one from the other, the appearance of the interior of each joint was remarkable. In most instances, although not in all, the articular cartilage was of a dark slate color, much thinner than natural, and in many places it was entirely lost. This was especially the case around the margin of the articulations, leaving the bone at that part quite exposed. The synovial membrane was considerably thickened, especially in those parts where it is most vascular. The quantity of synovia in each joint was small, of a dark color, and in some cases mixed with clots of blood. The character of some of the articulating surfaces, however, was quite different. In such the articular cartilage was pale-colored, and in some places of a palish yellow tint, velvety to the feel, and evidently containing fat; thereby indicating that the cartilage cells had disappeared and fat become deposited in their place. The ends of the bones were so much softened, that by applying a slight degree of force to the capsular or articular ligaments, small portions of the bone could easily be detached. The periosteal covering of all the flat and irregular, and also some parts of the long bones, was very vascular, and could easily be stripped off. The bones, generally, were likewise so very soft that they could be cut with a knife in any direction, with the greatest ease, and if pressure were applied to the cut surfaces, or where the periosteum had been removed, blood would ooze from numerous points. In the interior of the bones, the cancelli were filled with a red, gelatinous substance. The ribs, the vertebræ, and indeed all the irregular and flat bones were in the same condition.—The shafts of the long bones of the extremities were not visibly increased in size; nor was the shell or compact structure much altered. The ends of these bones, however, were enlarged and soft; and on making a section through them, in their long diameter, the medullary canal, and especially the cancelli near to their extremities, had a singular, although not a uniform appearance. In some of them, the whole of the interior was of a dark red color, from congestion of the vessels and effusion of blood into the areolar interspaces. In others, one half only of the interior was in this state, the other part being filled with a peculiar fat, and consequently very pale in color. It was at the end of the bone affected in this way that the articular cartilage was of a palish yellow color, velvety to the feel, and also slightly greasy. Even the teeth did not escape the malady, one of their constituents being evidently affected, which was evinced by the crusta-petrosa being much thicker and more spongy than natural."

Treatment of Big-head.—The ordinary treatment in vogue, in these parts, of boring into the bones of the face and jaws, for the purpose of removing foreign matter therein secreted or deposited, is a barbarous and useless proceeding; so also is the method adopted by some, of applying blis-

ters to the face and jaws. They create unnecessary irritation, and cannot possibly be of any benefit, for I contend that the disease is not *local*, but *constitutional*, and the intelligent reader after perusing these pages, will probably come to the conclusion that the disease has extensive ramifications over various parts of the body, and therefore the local treatment must fail in reaching the disease of the remote extremities. Emergencies may arise that require the use of the trephine and injections for the purpose of removing foreign matter from the interior of the jawbones, which threatens by its accumulating bulk to burst the bones asunder. In such case I have no objection to offer; the interior of the bones should be injected, but by none other than an educated surgeon. I am often told that horses get well of big-head after having all sorts of barbarities practiced on them—this is in accordance with the old error: "He got well after taking my medicine, therefore in consequence of taking it; this is assuming a falsehood as a fact and then giving fanciful reasons for it."

Both in the way of cure and prevention of this disease of the bones and their articulations more is to be accomplished by regimen, than by medicine. The subject should always be provided with wholesome diet, and whenever green vegetables can be obtained the horse should have an abundance of the same, or be turned out to grass whenever the state of the weather permits. Whenever I have a case of the kind under my treatment in this city I usually furnish my patient with an occasional dose of apples, beet tops, turnip tops, corn fodder, &c. If he happen to have any relish for the same I consider such articles the very best medicine in use, and not "*very bad to take.*" The object in giving fresh vegetables is to combat the scorbutic diathesis.

When a horse, with enlarged jaws, is suddenly attacked with acute lameness, he should be placed in a wide stall, and the limbs or other parts of the body (the seat or seats of lameness) should be occasionally sponged with a portion of the following:

Acetic acid	2 oz.
Water	12 oz.
Fluid extract of Indian hemp, .	1 oz.

Mix. The patient should have daily doses of the following:

Fluid extract Hydrastis Canadensis, (golden seal,)	1 oz.
Syrup of Garlic,.	2 dr.
Tincture of Ginger, ...	1 dr.

This treatment will palliate the lameness, improve the condition of the animal, and after a short time he may be got to grass. Should he not improve, it indicates that the disease will run its course; then the owner must exercise patience in order to wait the time when the invalid in *future* shall enjoy comparative restoration from the evils of a periodical attack of a constitutional malady.

The Importance of Currying Animals.—It is well known that every hair, whether long or short, is covered with numerous little barbs, like the barbs of fish-hooks, and, therefore, when a number of hairs are brought in contact with each other, and moved back and forth, they will work in among each other, and often form a mass so tangled—like the mane of a colt, which our ancestors have often taught us to believe were the stirrups of witches, which were accustomed to ride them in the dark nights—that it is difficult to disentangle them. The only means that cattle have of scratching themselves many times is to apply their tongues; and when the hair comes off, as it many times does by the handful, more or less, it will adhere to their tongues, and many times find its way into their stomachs; and the reciprocating motion of the stomachs of animals which chew the cud would soon form a bunch of hair into a pellet; and, as more hair was taken into the stomach from day to day, it would be very sure to all collect in one mass. Now, when an animal begins to shed its coat of hair there always appears to be more or less irritation of the skin, and if the card or curry comb is not used pretty freely, the tongue will be applied; and if an animal is well curried every day, when it is shedding its coat, it will be far less liable to collect hair in its stomach. A ball of hair—being indigestible—in the stomach would be very likely to injure its energies so as to produce disease, and eventually premature death.—[*Scientific American.*

Care and Management of Swine.

A writer in the *Stock Journal* gives the following sensible remarks on the care and management of swine:—

The chances for waste grain around the yards has past. Swine now depend upon dealt feed; but our wheat fields are mostly clear now, and if the grazier would know how quick his swine would pick up every scattering head (and that, too, with avidity), and how many pounds of pork such stray heads would contribute to make, let him make haste and ring (if not done in proper season, which should be at the time of castrating, about four weeks of age,) his swine as soon as possible, and demonstrate the matter to his own satisfaction; and if it don't pay, send me the bill and I will foot it.

Next come the oat fields. Often it is the case that oats shell in cutting or binding; but—would you believe it?—they will pick up every head or oat if put into the fields immediately after the oats are cut. A remark—a very true one—was made to me once by a grazier, "That by putting his hogs in pasture, and feeding the wash from the kitchen, it took the grain out of them, as horsemen express themselves; cools and purifies the blood, invigorates their digestive powers, cleanses their stomachs, and consequently they are more sensitive to the effect of grain." Now the fields are all cleared, we must not lose what we have gained by or from the gleanings of them, but must call this the starting point of the fattening process. If not, a farmer should make it a practice to have some old corn or middlings on hand to feed at this time.

The hogs calculated for pork should now be put up in pens; and at 12 o'clock each day wash off the hogs and floors with cold water, always remembering the rule to feed at regular hours. One-third more pork can be made from the same

amount of food in the months of September and October than any months thereafter. A good feed can be made by taking wind-fall apples, small potatoes, kitchen wash, corn meal or middlings, and cook it, adding one handful of salt to each bushel of feed. Hogs like it and will fatten rapidly on it. Fermented barley is very good to fatten hogs, but should not be fed until cool weather. Give plenty of charcoal to your hogs, if kept on floors: rotten-wood will answer the same purpose. Occasionally a teaspoonful of sulphur to each hog will make them healthy.

STOCK RAISING—HORSES.

Spike Harrow in *Germantown Telegraph*, says: This, if not the *most* important, is *one* of the most important branches of stock raising.

Every body likes to drive good horses, yet how few take much pains to raise them.

It costs little or no more to raise a good horse than a poor one. Any one who owns a good sound mare may raise good colts; they may not be Flora Temples, but, if a little care is exercised, will be good and may be excellent.

Henry William Herbert truly said when speaking of the horses of this country, that, "If a horse will carry his rider without kicking him on his head, or draw him in his wagon or buggy without kicking it to shivers; if he will go off at a walk, increase his speed to the top of his gait, and stop again when pulled upon without running away; if he will hold back going down hill; if he will not balk going up hill; and more particularly if he will stand at a door without tying—he is held to be fully broken, and is willingly received, credited, and paid for as such."

I will suppose that the farmer owns a mare and wishes to raise colts. Too many will procure the services of the nearest or lowest priced (not cheapest) horse. This is a grand mistake with any kind of stock, and none more so than with the horse. The stallion should be chosen with regard to the mare, and kind of service desired of the offspring. If the colt is wanted for a common farm horse, for working and driving, then choose the horse accordingly; if the mare be narrow chested, then choose a wide chested horse; if she is short legged, choose a long legged horse.

After selecting your horse, little can be done until the mare is nearly ready to foal. This is a critical period both for the mare and foal. *Moderate* work will not injure even within twelve hours of foaling time; but unless it is absolutely necessary, it should be avoided for a day or two. As the time of foaling approaches, if the mare is worked, she should have more generous feed, for she has not only herself to support, but also her colt.

In warm weather a cool, airy place is best; but in cold weather, warm shelter but not *close*, should be provided. A little extra care and feed at this stage will be amply repaid. After this, nature should be allowed to perform her task. As soon as the colt can stand, let it be handled and petted and even be haltered. It is much easier to handle now than when one or two years old. It is better to allow it to follow the mare when she is at slow work; the exercise will be of use to it, and it can obtain its food whenever it is hungry.

Let the colt be accustomed to have its feet raised and struck with a hammer or stone; let it be led about with a halter or by the forelock. At this age punishment should never be resorted to, but rewards should be given often.

This petting and handling could be continued until the colt is two or two and a half years old, then he may have the bits and surcingle. At three years old the gears may be put on him, a piece at a time, taking care never to frighten him with them. Before hitching him to the wagon, let him become accustomed to the gears and straps hanging about him. Let him smell everything about the wagon that he is afraid of. Place him alongside of a quiet horse, and if his former education has been properly conducted, there will be little or no trouble. Let him be petted and rewarded with a handful of corn or oats occasionally.

Patience and good temper are now very important items, and if the breaker lacks these two qualities, the colt stands a good chance of being spoiled. Learn him to walk fast, for whatever habit he now acquires will mostly be permanent, or very hard to eradicate.

Let him first draw the empty wagon down a slight grade; then up it; then with a load gradually increased; but care should be taken not to continue the first lesson too long, or he will become tired and worried.

One thing is certain, that care and patience at this stage, will amply repay itself in the future.

Do not put him to hard work while young; a year's exemption from hard labor will add four or five to a horse's life.

Sores on the Legs of Jacks.

Ed. Valley Farmer: A subscriber last year asked for a cure. A receipt was furnished (by Mr. H. Corby) through the *Valley Farmer*, which I have considered very good. A preventive however is better where it can be had.

Jacks frequently become restless and irritable. Most generally after the season is out, they are left to do their own grooming. Flies settle upon parts of the body where they have been licking, particularly about the knee and hock joints. This gets their *dander* up, and they bite at them exceedingly hard, so much so that it starts a sore. Increased attention on the part of the flies and increased determination on the part of the jack to swallow them alive, finally makes a bad sore.

Preventive.—All jacks should have a small lot to run out in. In the warm weather turn them out only at night, *i.e.*, where there is a disposition to be always biting. And in the day time keep them haltered (pretty short) in the stable, and have some pantaloon legs made and fastened with a strap over the shoulders—one for the hind legs over the rump with a back strap from the withers to the top of the rump, for the purpose of keeping the rigging to its place. ****

HORTICULTURAL.

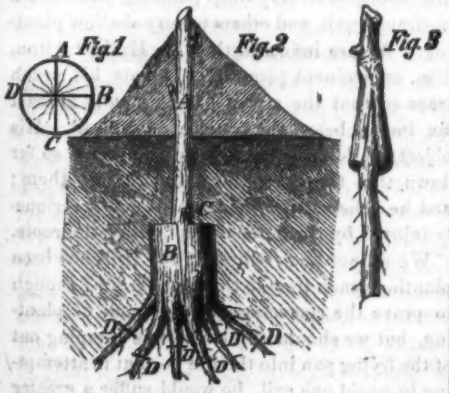
[Written for the Valley Farmer.]

GRAFTING THE GRAPE VINE.

BY WILLIAM MUIR.

This operation is most easily and most successfully performed on the root of an established vine. It will succeed at any time from March till June, although those grafted from the middle of April to the middle of May, in this latitude, have been found to suffer the least from accident, and make an excellent growth during the season.

The earth is to be removed all round the stock to be grafted on, to a distance sufficient to allow the operator freedom to work. With a pair of pruning shears, or, if the vine is large, a small tenon saw, the stem of the vine is cut off at from 2 to 4 inches from the surface, and the end remaining in the ground cut perfectly smooth, as at C, Fig. 2. A chisel or strong knife



and the stroke of a mallet makes a slit about an inch and a half deep across the end as in the line A C, Fig. 1. Into this is put an iron wedge made from a nail or piece of tapered wire rod, to keep the slit open to be ready to receive the graft with as little forcing as possible; and when this wedge is removed, the tension of the wood, if not too deeply split, will hold the graft firmly in position. In cases where the stock is thick, 2 grafts may be set as at A and C, or four by splitting across again and setting at B and D, Fig. 1.

The scion or graft is then to be cut, as shown at A, Fig. 2, and should consist of a piece of well ripened wood, having as a medium 3 or 4 good eyes. This will be generally determined by the character of the growth of the variety: the eyes of the *Clara*, for example, being generally very closely set, and the eyes of the *Concord* far apart. We have grafted largely and successfully with only one eye; but would recommend four; but the piece should be of sufficient length to permit the top of the graft to be from 2 to 4 inches above the surface. A small shoulder is to be cut on each side of the lower eye, as at C, Fig. 2, and a smoothly cut tapering point of an inch to an inch and a half in length as at B, Fig. 2. This wedge must be thinned off slightly at the back so as to cause the principal pressure to be on the outer edge, and so bring the very thin barks of the stock and graft into immediate contact. The eye being set towards the bark and the bark of the stock and graft made to coincide exactly, the wedge is gently withdrawn and the wood of the stock clasps the graft with sufficient firmness. The stock and graft will then appear as in Fig. 2. If the stock is stiff enough to keep the graft in position, no tie or band is needed. If not, a narrow band of grafting plaster may be used, or it may be tied in with common twine; but we have found the twine in many cases to rot too soon.

The earth is then pressed firmly, but gently, around the graft, and raised to cover slightly the upper eye as is shown by the dark lines in Fig. 2, and a very little straw or litter may be put over the mound to prevent a heavy rain from washing down the earth.

Sometimes we have found it necessary or desirable to cut out the centre root entirely. Cut the lateral roots at unequal distances (as shown on a small scale at D, Fig. 2,) all round from where the tap root was, fastening the graft into the root firmly, and by bending, twisting, or pegging down, having the grafts in such positions as not to crowd each other, and then filling in as before. In this way, from one stool of roots we have raised 37 independent plants. This method is also convenient in a case where some rare variety is desired to be grafted, and no root conveniently at hand. We take a lateral root cut clear of a bearing vine in the vineyard; draw it back sufficiently from the parent vine, and graft it as before indicated.

Objections have been lately raised to grafted

vines, in part through fear of the old stock out growing the grafted variety. This is not much to be feared, if the point of insertion is sufficiently deep, but can be entirely removed if *a single plant for fruiting permanently in that place* is not desired, for roots are plentifully emitted from the lower bud. These can, in the fall, be carefully taken up, turned up to the stem like inverted, closed umbrella bones, and the connection at C, Fig. 2, cut off below these roots—and the plant stands then exactly like a *Layer* plant, and has no portion whatever of the stock attached. By this method we have made some hundreds of fine plants, of over 30 varieties, on the *wild stock;* and by cutting off a small piece of the lateral root in the spring, made another independent plant on the same root for several years in succession.

Much care has to be taken to insure success in this beautiful, simple, and economical operation: *care*, that the bark of the scion and stock coincide, as the bark of the grape-vine is exceedingly thin, and that the shoulders of the scion, as at C, are brought to bear fully upon the stock. This does much to insure the bark's coinciding; *care*, that nothing disturbs or displaces the graft; *care*, that the ground is not left too loose and hollow so as to get water soaked and rot the eyes; by making hard the earth round the graft that has been removed as well as that of the mound; the mound does much to prevent this rotting in cold, wet weather; *care*, that when the eyes push and come to the surface they are not broken off by too compact soil or accident; and, *care*, that the entire soil is of such a rich character as to encourage the development of an abundance of healthy roots. With such care, *root grafting the grape-vine is more uniformly certain than grafting the apple.*

We have also grafted with success upon *pieces of the wild root;* but would only adopt it when circumstances rendered the former method impossible. In the beginning of March, procure pieces of fresh roots, from three-quarters of an inch to one inch thick, and six to eight inches long. Split the end and tie in the graft as indicated in grafting on the lateral roots. Give deep, rich soil, and shade and water in the hot, dry months, and a large per centage will live; but we have not found them to make such fine, thrifty plants as the foregoing.

Root grafting is also extensively adopted by nurserymen. Fig. 3 in the above cut will illustrate the method adopted by them in grafting. Small pieces of roots are used about an inch and a half long. The scion is not quite as long as the root, containing one eye. After the grafting, strips of waxed paper are wound around the parts, as in apple grafting. The paper does not extend to the entire length of the root, so that there may be a chance for the free emission of roots, when the graft begins to grow. They are then put in a hot bed, or in a propagating house, where they are subjected to bottom heat, and soon commence to grow. Before being set in the open ground they are transferred to pots once, where they get established, and then they can be safely planted in the ground. The grafting may be done in February, and they make good saleable plants in the autumn, if properly treated.

By grafting as above illustrated, vineyards planted with the old, or with undesirable varieties, can be cheaply renewed with better varieties, and only about one year will be lost in the operation; and we *hesitate not to predict that this will do more to give interest to grape culture and success in its pursuit than all other agencies combined.*

Melrose, St. Louis Co., Mo.

Peach Trees: Distance and Depth of Planting.

We have had some inquiries in regard to the distance apart, and depth to which peach trees should be planted. In regard to the depth, some are favorable to very deep planting, others to a medium depth, and others to very shallow planting. We are informed that Dr. Hull, of Alton, Ills., an eminent pomologist, plants his peach trees so that the crown of the root is at least six inches below the surface of the soil. His object, in doing this, is to get the roots so far down that the borer will not work into them; and he believes that the tree will not be seriously injured by the borer if kept out of the roots.

We do not know whether Dr. Hull has been planting peach trees in this manner long enough to prove the correctness of this mode of planting, but we should think "he was jumping out of the frying pan into the fire"—that in attempting to avoid one evil, he would suffer a greater one. We do not think that a tree planted to such a depth can live as long, or be as healthy, thrifty or productive, as a tree planted as Nature plants them. Plant a peach stone, and the crown roots of the tree are all on the surface—not buried several inches deep—away from the sun and atmosphere. Go into our fields and forests, and you will find that Nature never plants in this manner. The roots are near the surface—not in the

cold sub-soil. We think it is advisable to plant as Nature dictates, even if we do have to worm the trees—that is, dig out the borers, two or three times a year. We would infinitely prefer to make a small mound around the body of each tree to planting so deeply—as it must answer the same purpose, by keeping out the borer, as deep planting—though we are not certain that either plan would prove entirely effective in preventing the borer from reaching the roots of the trees.

We think all trees should be planted at the same depth that they naturally grew—certainly no deeper. We would prefer to have them planted a little shallower rather than deeper, and especially if a light mulching of straw, sawdust, tan bark, or something of the kind could be applied.

In regard to the distance apart at which peach trees should be planted, there are also a variety of opinions and practices. We notice by the public journals that the Rev. Mr. Knox—the great Pennsylvania fruit grower—is planting his peach trees but ten feet apart, making them branch near the ground, for the purpose of shading the ground and the bodies of the trees, preventing the wind from sweeping along, on the surface of the ground, absorbing the moisture from the soil; and also, we understand, he expects by planting in this manner to prevent the ravages of the borer, as he thinks they will not work in this dense shade. His peach trees are but three years old, look remarkably fine and thrifty, and have not been affected by any disease, or attacked by the borer. We cannot tell what will be the result of the experiment, but we have doubts of its success. Peaches to color up well, and make a fine appearance in the market, need plenty of sun, light and air, and it seems to us that the thick planting adopted will so shut out the sun that the peaches will lack color and flavor. We are anxious to learn the result of the trial. Mr. Knox is an intelligent and successful fruit grower, and generally knows what he is about, and there may be more in his system of planting than we are aware of. The prevailing distance of planting peach trees is twenty feet apart. We have noticed that our best market growers—those who have been raising peaches for many years—adopt this distance. On thin soil, we have no doubt, if planted fifteen feet apart, and made to branch within a foot from the ground, and kept well shortened in, every year, as they always should be, that it would be sufficient; but with the treatment they commonly receive, we recommend that they be planted eighteen or twenty feet apart.

[Written for the Valley Farmer]

"Take Care of Your Fruit Trees."

I find an article with the above heading in the January number of the *Valley Farmer*, and I am of the same opinion as the writer, on the main point, *i. e.*, that care should be taken of them, yet I differ with him in the way it should be done. Let us see in what:

My experience is, that the more exposed the situation, to all winds, the surer the crop of fruit. I think a tree can be hardened against cold as well as a child or an animal; and the more it is sheltered and petted, the more will it suffer from sudden colds; therefore, if we cannot at once build a house over it, or a roof, so as to protect it completely, we had better not try it at all. I have facts to prove my doctrine, too, and here are a few of them:

My orchard is partly on the south-east side of a hill sheltered from all cold winds; part of it has a southern location, and another part is on the the top of a high ridge and on the west side of it, exposed to all the cold winds. Now, a succession of crops proves to me, that the lower and more sheltered the location, the less fruit I get; whereas, on the exposed situations, I have fruit, more or less, every year. Nay, more, in the cold winter of 1855, '56, one half of the trees on the south side were killed, or so badly injured that they are almost worthless, whereas in the exposed situations they escaped comparatively unhurt.

The cause of this seems to me perfectly clear. In the winter, we often have warm, sunshiny days, when the sap begins to move and the buds to swell; it may turn suddenly cold, and Jack Frost will nip the buds, and chill the sap, coming over them unawares like a thief at night. It is like keeping a child in a warm room for a number of days, and then turning it into the cold air suddenly. But where your trees are exposed to every blast, and keep shaking their branches in the face of Jack Frost, they are like hardy boys, romping about and defying the cold. You will seldom see them catch cold, nor will your trees.

Take care of your trees, by cultivating the ground well, planting well, pruning well—that is not too much nor too little; form their heads low, keep the borer and peach worm away from them, and plant either on a ridge or on a western or northern slope, and my word for it, they will do better than by sheltering and petting them.

GEORGE HUSMANN.

If a fruit tree is worth planting, it is worth taking care of after being planted.

[Written for the Valley Farmer.]

GRAPE VINE CUTTINGS.

PREPARATION OF THE CUTTINGS.

In the making of grape vine cuttings, it is best to prune in November, after all growth has ceased, the leaves fallen off, and the wood fully ripened; but before the frost has been so severe as to hurt the buds, which is frequently the case when pruning is delayed till spring. Medium sized wood, firm, well ripened, and of not too rapid growth, so as to have the eyes tolerably close, is to be desired. The wood is then to be cut into pieces of about fifteen inches long, the wood cut off at about a quarter of an inch below the lowest eye, with a clean, smooth cut, and at least an inch of wood is to be left above the upper eye.

Some contend for a small piece of the two-year-old wood at the bottom, but this, to be invariably required, would greatly reduce the quantity of cuttings, and the only benefit of the old wood is the cluster of eyes on the new wood, while the body of old wood is too hard to permit the easy emission of roots. So we prefer cutting off the old wood entirely at the point where the new wood rises from it, and use only the one-year-old wood. All the butt ends are placed together, and the cuttings tied up in small bundles of about 50, with willows. A narrow trench is then dug—say one foot wide and of length sufficient for the number of cuttings to be made—and the bundles set in close together with the butts down, and the bundles in an upright position, so that the tops of the cuttings are level with the surface of the ground. The spaces are then filled in with the fine earth, and attention must be given that if the soil settles and leaves the cuttings too much exposed, that more earth is applied.

By the adoption of this method of making the cuttings in the fall, three important points are gained: First, there is no danger of the buds being winter killed, which often takes place by the alternate freezing and thawing; second, during the winter months the tendency of the sap being downwards, and its descent being facilitated by the moisture, warmth and darkness consequent on burying, the callus ring is formed, and the cutting is ready to throw out its roots with the increasing temperature of spring. The cutting thus gets a good start before the extremely hot weather, which is with us so fatal to young growth. The amateur may not know that this callus *must* be formed previous to the emission of roots. Third, it is a fact in the growth of the grape vine, that the softest buds develop first; hence the tendency of the buds at the ground, and at the extremity of the last season's growth, pushing first, and that frequently to the detriment of the vine and great annoyance of the amateur grower. The burying prevents the indurating influences of winter being exerted on the buds, and keeps the covering of the buds soft, which thus yields easily to the pushing of the young, starting germ.

PREPARATION OF THE SOIL, AND PLANTING THE CUTTINGS.

In spring, from the first to the 20th April, a piece of good, clean, rich ground, is to be selected, entirely free from shade, so as to be early warmed up by the sun's rays; and we think that labor is here well expended. Dig a trench as long as the intended bed will be wide; the soil should be 16 to 18 inches deep; if it is not, remove the top spade and lay it aside, take out another spade deep of the sub-soil, spread the bottom over to the depth of three inches with a compost, (of clean sand 1 part; powdered charcoal 3 parts; rich leaf-mold 4 parts,) and put in the cuttings about 6 inches apart each way. Press the soil firmly around the cuttings, particularly at the foot. Have the upper eye rather under the surface, so that if the soil subsides it will be level with the upper part of the bud; repeat till all the cuttings are in. In the hot weather in July and August, a partial shade of brush stuck between the rows, and some long litter (as potato vines) loosely thrown over them, and occasional *thorough* waterings will be found highly beneficial.

Another method is to make the soil very deep by twice plowing in the same furrow, and enriching with old, completely decomposed, stable-yard manure. Harrow and roll, and plant the cuttings in rows with a dibbling stick, or as above stated, leaving out the application of sand, charcoal and leaf-mold.

A very important item was given the writer by Mr. Jacob Rommel, of Hermann, which we twice tried with success, that of making the cutting bed completely in the woods, the uniform shade causing the cuttings to take with great uniformity. By this method 95 per cent. of Norton's Virginia cuttings did well, and this variety has never been found to succeed from cuttings treated in the old way; but it must be observed that it is an essential condition that the bed be in the heart of the timber, as partial shade is ruinous. In the case of an open bed, the writer has used a canvass shade from 10 A. M. till sunset during the hot, dry months, with decided advantage.

William Muir.

[A very interesting and acceptable article—

though rather late to be seasonable, yet we gladly publish it. Vintners commonly make their cuttings in this latitude in February and March. If the cuttings are taken off in November, and properly put away, it is undoubtedly the best season to make them. But unless they are properly cared for, they will rot or dry out, or get frozen, or otherwise injured. The cuttings callus over well, when taken off in the fall, and put properly away; but a great deal of care must be used in planting them, or the callus will be an injury instead of a benefit. The callused parts are exceedingly delicate and tender, and a very slight exposure to the cold, air, or sun, will entirely destroy the callus. It is because the cuttings thus callused, are not generally carefully taken up, well protected, and speedily planted, that so many die. On account of the necessary exposure, and great carelessness in taking up and planting out the cuttings in this condition, we are almost inclined to recommend making cuttings in March, and planting out in well trenched, or deeply subsoiled ground, sloping to the north. We know this plan will prove successful in raising good plants and causing a large per cent. of them to grow. A thorough mulching applied to the ground after the cuttings are started, will prove of great advantage.

We have had a very mild and favorable winter, thus far, in this vicinity. Grape vines have not been injured by severe cold, and cuttings can be made at any time, which, with proper care, will be almost certain to do well.

Our friend, F. A. Quinette, recommends grape cuttings to be taken off and prepared in the fall, and put in boxes a foot or two wide by three feet long, the cuttings standing on the end, as they will in the ground, having a couple inches of oats in the bottom of the box. After the box has been properly filled, it is put down in a cellar. Water is occasionally thrown over the cuttings, which, by wetting the oats, causes them to sprout and grow up among the cuttings, which callus over finely. In the spring, when the ground is warm and well prepared, the box is taken out to the field, and the cuttings carefully taken out, planted one by one; and nearly all of them with this treatment will grow and become fine plants.]

To Keep Rabbits from Trees in Winter.—Two years ago I found the rabbits gnawing my choice trees severely. I had seen several remedies recommended, such as tying on strips of lath, bark, wrapping with straw, &c. But I thought some kind of a wash would be much cheaper, and less work to put it on. I took a small quantity of tobacco and made a strong tea of it; then a thick lime whitewash, and stirred in the tobacco. With a brush or swab, a man can wash 1000 in a day. It proved a remedy with me. My rabbits, although uncivilized, are too nice to chew tobacco. If storms wash off the mixture, wash them again. It does not cost much.—[S. Foster, *in Country Gentleman.*

[Written for the Valley Farmer.]

GRAFTING THE GRAPE.

ANSWER TO PRO BONO PUBLICO.

As this gentleman wishes to have information in regard to the *modus operandi*, I will answer the questions propounded to the best of my ability.

First—I graft the vine below the ground, at the first smooth place below the crown.

Second.—I graft in March, just when the sap begins to move, but before it begins to flow very strong, generally about the 15th to the 30th. Grafting in May, when the sap has ceased to flow very rapidly, will also do, but the grafts will not be so strong, nor will the wood ripen so well.

Third—The best age for the stock is the third and fourth year; the scion should be medium sized wood one year old.

Fourth—The graft should consist of two to three buds, and be far enough below the ground so that only one bud is above the surface.

Fifth—I use no paper or cloth, where the stock is large enough to hold the scion firmly, and only press moist earth over the cut, so as to cover the wound.

Sixth—Scions should be taken off any time during the winter, provided the wood is not frozen at the time; and buried, either in a dark, cool cellar or on the north side of a building or fence, to keep them fresh or green, yet dormant.

Seventh—The stock is cut off smoothly and split with a knife or grafting chisel; the scions cut to a long, smooth wedge shape, thinner on the inner side; and inserted so that the inner bark of stock and scion (which is very thin on the vine) are well united. Insert two scions, where the stock is large enough, one on each side, and press moist earth firmly down on the wound; then cover up the whole with finely pulverized earth. Put saw-dust over it as a mulch to keep the soil moist and loose. This, I think, also answers question eighth.

Ninth—There is a difference in varieties. The Concord, North Carolina Seedling, Cassady, and Herbemont, will take easy; the Norton's Virginia, Cynthiana, Delaware, Arkansas, and all the hard wooded varieties, are more difficult to graft.

If Pro Bono Publico, or any other of your readers, can succeed by following this method, I shall be glad to hear it. George Husmann.

[Written for the Valley Farmer.]

GARDEN HINTS FOR FEBRUARY.

By Carew Sanders.

The first thing in order for this month, is the family hot-bed. By this, we mean a hot-bed or two for raising early salads, radishes and lettuce for the family table; and cabbage, tomato, egg-plant, cucumber, and sweet potato plants to set out in the open ground when the proper season arrives—and without which, to start the above plants early, the proprietor will either have to purchase the plants, or find himself behind his more enterprising neighbors.

The first week in the month is none too soon to commence such a hot-bed. A single bed may consist of from one to four sashes: each sash should be made four feet wide by six feet long—this is found to be the most convenient size for handling—to be glazed with 6x8 or 7x9 glass—larger than the latter is not to be recommended on account of its greater liability to get broken, and requiring large glass to re-place it when broken. The sash can, however, be made to order of any desired size at the sash factory, and a handy man can prime, paint and glaze them himself in bad weather in winter, all ready for use. These are called *lights*. The box or *frame* may be of inch plank—one foot wide for the front and eighteen inches wide for the back, with ends to give the width equal to the length of the sash: thus, a box 6 feet wide and 8 feet long, with a cross-bar running down the middle, will make a two-light frame. This is, perhaps, the best size for a hot-bed for family use, as two or more of them can be placed side by side with as much facility as a four-light frame can be put up, and the smaller ones can be put up at different periods, as also from the fact that the different plants grown in them require different temperatures and treatment.

Having got the frame and lights ready, the next thing is to prepare the material for the bed. Stable manure, where the horses have been bedded with wheat or oat straw, is the best, and should be obtained if possible. Where hay or other grass has been used, tolerable hot-bed manure can be had; but saw-dust or planing mill bedding, makes the worst of all—the heat is violent for awhile, but it burns and dries out, and cannot be relied upon to furnish a steady and lasting heat like straw manure. The best hot-bed for retaining a lasting and steady heat we ever saw, was obtained from manure that had been tramped down in the stable by the horses all winter, and was some 18 inches thick, packed hard and tight. The material used was prairie hay. None of its heating properties had been exhausted, and its thorough freshness had been retained, and when taken out, loosened up and shook well together, it heated up finely.—The rank steam (that which assails the nostrils) must be allowed to pass off, and the whole mass brought into an even state of heat and moisture by being turned and mixed well together several times previous to being made into the bed. Select a dry spot, laying open to the morning sun, and sheltered on the north and west by buildings, fences, or trees; then excavate a hole somewhat larger than the frame, and 18 inches deep, in which make your bed, by distributing the manure in even layers all over until you have reached a foot above the surface of the ground; beat down firmly with the fork as you proceed, but do not tread it, as it checks the rising of the heat; now place the frame on the manure, so that it can settle with the decay and subsidence of the manure—this is better than having the frame fixed and allowing the surface of the soil and plants to settle down a long way from the glass. Put on the lights, and in a day or two the heat will be up sufficiently to be ready for the soil. Light, rich soil, and none other, should be used, which may be made for the purpose by mixing together equal parts of old hot-bed, or other *thoroughly rotten* manure, decomposed sod, or best garden soil, and leaf mold from the woods, with a little sand. The inside of the frame should be filled up some inches with the hot manure, and from 4 to 6 inches of the above soil, the surface of which should be within 6 inches of the glass when finished; for radishes, 6 to 8 inches of soil is not too much—while 4 inches is sufficient for cabbage and other such plants.

In a day or two the whole mass of soil will become warm, which can be told by thrusting the hand into it, and if any foul seeds are suspected of being in it, it may be left a few days longer till they germinate, when the soil may be stirred and the weeds destroyed.

In the proportions and kinds of seed used, we would recommend for a two-light hot-bed (where another is to follow), one whole light to be sown in radishes—the Early Scarlet Short Top, or the Early Red Turnip, is the best for this purpose; a half light may be sown in lettuce to furnish plants, and the other half in Early York cabbage, and if Kohl Rabi is desired, a single row across the bed will furnish plants enough of it; or the whole may be used for raising cabbage plants, of both spring and summer kinds, for succession; also lettuce and tomato. For a four light frame, to furnish plants only, one light may be used for early cabbage, another for late do. and lettuce, a third for tomatoes, peppers, &c., and a fourth for choice flower seeds; though two lights will furnish a large number of plants, enough for almost any private family, and the other two may be devoted to salads. It is, however, preferable to have a separate bed in which stronger heat is maintained and less air given, for tomatoes, peppers, egg-plants, cucumbers and melons; and two lights will raise a large quantity of all these—indeed an ample supply.

After the first bed is cleared of its crop, cucumbers, previously raised in pots in the second bed, may be planted out in it; or sweet potato slips may succeed the first crop, or tomatoes be transplanted therein, or various other changes made, so as to include a second crop.

After the seed is sown, the glass must be covered with shutters, straw mats, or other protecting material, during the prevalence of frosty weather, and the plants aired by tilting the back of the lights during the greater part of mild and sunny days.

Plants in hot-beds are subject to the following casualties: They are liable to be drawn up weak,

spindling and tender, by too close confinement, excess of heat, and lack of air; are liable to damp or rot off, from too much moisture combined with the above, and a possibility of getting frozen or too dry in the beds—all of which must be guarded against.

EARLY CROPS.

If the spring promises to be an early one, and the weather becomes somewhat settled by the end of February, work may often be commenced in the kitchen garden. If the weather is open and the soil tolerably dry, digging the ground may be accomplished, and any planting of small fruit shrubs, gooseberries, currants, raspberries, or the cuttings of them, that requires to be done, is better when done as early in the season as the weather will possibly admit. It gives them a chance to get an early and vigorous start, and can be better done than later, when everything is hurry and bustle—but no planting should be done, nor any working of the ground, when it adheres to the feet in wet and clammy masses, if it can possibly be avoided.

If a light, dry and warm border is to be had, a small sowing of peas may be safely indulged in, and a small bed of radish, lettuce, spinach, and such like hardy vegetables; a few rows of the earliest potato may be committed to the ground for early use, taking the precaution to plant them rather deeper than usual, and in none but dry soil. All these early vegetables may be saved a little from risk, by scattering over the ground a thin layer of half-rotten straw that will lay loosely over the young, tender leaves when they first come up.

[Reported for the Valley Farmer.]

Meramec Horticultural Society.

ALLENTON, Jan. 2nd, 1862.

The thirty-seventh monthly meeting was held according to adjournment—President Morse in the chair.

The reading of the minutes of the former meeting was dispensed with.

The List of Peaches for Market Purposes, presented by the Executive Committee, was laid over indefinitely.

One new member was admitted.

The Secretary presented a communication offering to the Society an Essay upon the Difficulties Encountered by the Amateur in Pruning Fruit Trees, and How to Overcome Them: by an Amateur.

The Corresponding Secretary reported having received a parcel of seeds from the Patent Office for distribution among the members.

The President announced the standing Committees for the current year: On FRUITS, Dr. A. W. McPherson, Dr. J. B. H. Beale, Mr. Bernard Arnoldt. FLOWERS, Messrs. Muir, Seymour and Vaughn. VEGETABLES, Messrs Kittredge, Harris and Votaw.

The Fruit Committee reported: Your Committee find but a small show of fruit to-day.

Mr. P. M. Brown exhibits specimens of Wine Sap, Jeneton and Pryor's Red, that were gathered from the ground under the trees this morning, perfectly sound and in good eating condition; also good, large specimens of Jenetons from the cellar, wanting in color.

Mr. L. D. Votaw shows us the Pennock (with DRY rot) and five varieties of seedling apples, two of which are good.

Mr. T. R. Allen has good specimens of the Jeneton and Ortley—the latter inferior; also a specimen of Ortley raised by Mr. Lewis Dettweiler, of Jefferson Co., very fine indeed. We hope he will send us some other varieties—would like to see some Jenetons, Wine Sap and Pryor's Red from his orchard.

A. W. MCPHERSON, Ch.

The Executive Committee offered another instalment of "Fruits Proper for a Family Fruit Garden:"

SMALL FRUITS:—STRAWBERRIES, Jenny Lind, Triomphe de Gand, Longworth's Prolific, McAvoy's Superior. RASPBERRIES—English Red Cane, Belle de Fontenay, Native Black Cap. GOOSEBERRIES—Houghton's Seedling, Whitesmith and Wellington's Glory. CURRANTS—Red Dutch, Red Grape, White Grape. GRAPES—Delaware, Concord, Diana, Herbemont, Catawba, Hartford Prolific.

In presenting this list, the Committee beg to remark, that in the article gooseberries, the two foreign varieties named have been found to do well in this vicinity for a number of years, and by several individuals, and think that the size, color and flavor of these and their successful growth thus far would render many of the foreign varieties a great acquisition in the family fruit garden. The Committee present this list of Grapes with some diffidence, for the want of sufficient experience with some of them, although all have been growing in this vicinity for some years, and seem to succeed as well here as elsewhere. Still, there are some slight drawbacks with some of them, but we conceive that no family fruit garden can be complete without these grapes.

A. W. MCPHERSON, Ch.

In the discussion of the Report on STRAWBERRIES, Dr. McPherson said the Jenny Lind had been tried here and had done well.

The President had fruited it last season and liked it much. It was not so early as the Large Early Scarlet, but seemed to do better in this climate. Have also fruited Triomphe de Gand, and if I had to be confined to one variety of strawberry would prefer this. Likes Longworth's Prolific very well.

Secretary has fruited McAvoy's Superior four years; it is an excellent variety, hardy, healthy, sweet, large, a good bearer, SOFT; but it has one fault, being a pistillate variety, it requires an impregnator.

Dr. McPherson has fruited the Longworth's Prolific and found it do very well; it is much asked for in St. Louis by the ladies, as the PINE APPLE STRAWBERRY, at the fruit stores

RASPBERRIES—Dr. McPherson said that the English Red Cane was much cultivated here and found to do well, being quite hardy; a good bearer, and good berry. It was spoken of in a similar manner by several of the members.

Mr. Arnoldt spoke highly of the Belle De Fontenay, has seen it bear from three to five crops in a season; it is hardy, a free grower, and has a fine berry. The Raspberry is apt to degenerate, and the fruit to become inferior, unless the bearing wood is removed immediately after fruiting.

The Secretary has tried the Wild Black Cap, and finds it improve much; has tried Mr. Doolittle's method of keeping up a succession of strong, healthy wood, by allowing it to renew itself by the tips of the shoots, and finds it do well, and thinks that fruit growers are much indebted to Mr. Doolittle for directing attention to this fact as the key to the successful cultivation of the Native Raspberry.

GOOSEBERRIES—Dr. McPherson had been disappointed with the Houghton Seedling last year—but in most of the gardens here they had done well, and bore profusely.

The Secretary had fruited the Whitesmith and Wellington's Glory for four years, and had no ground for complaint; they bore full crops of large fine berries, and had no mildew, and that without any special culture. He considered the berry Mr. B. Smith received nine years since from Tennessee, the Whitesmith, and that had no mildew during that time. Had seen a variety cultivated by Mr. Lebaume, of St. Louis, without any mildew for many years, and thinks them also the Whitesmith; and certainly thinks that the great size and excellence of the fruit should stimulate to a course of well conducted experiment with the foreign varieties.

The Report of the Gooseberry Growers' Association

in New Jersey, as given in the Patent Office Report for 1860, was highly encouraging.

Dr. McPherson thinks that in most of the instances in which they have been tried, they have been said aside upon the slightest appearance of any difficulty, the public prejudice has been hitherto so strong against them.

Mr. Arnoldt has seen 27 varieties of the English Gooseberry in successful cultivation on Lake Ontario.

CURRANTS.—Mr. Arnoldt thinks nothing of the Cherry Currant; it is very acid, and to be grown large must be planted on a dunghill: the Red Grape is better, and the Red Dutch sweeter, and does better with poor culture.

The Secretary gives all the varieties the same culture; has had the Cherry Currant three-fourths of an inch in diameter, and finds that with the same culture the Red Dutch requires to have the old wood pruned out, as it bears best on two-year-old wood, and the four-year-old wood becomes completely covered with almost infinitisimal berries.

The President agreed as to the necessity of pruning.

Dr. McPherson knows of the Red Dutch being grown year after year without pruning or cultivation, and producing large crops of fine berries annually for many years.

Mr. P. M. Brown knew that to be the case.

GRAPES—Mr. Arnoldt thinks the Delaware our best grape; a slow grower for the first year or two, but after that grows well; it will not bear as close pruning as some other varieties, and is best trained upon trellis.

The Secretary thinks it has been too highly lauded; we have to wait too long for the fruit; it was affected by the heat of last summer

The President had found this the case, but it was the same with the Catawba, it was so affected in Hermann.

Dr. A. W. McPherson is not so unqualifiedly in its praise as some.

The Secretary said that the Herbemont was one of the best growers he had. Was a fine bearer of most excellent fruit, but he would hesitate to recommend it for the family garden, as it required protection in the winter. Thought from the statements of Mr. Noe, at the Hermann meeting of the State Fruit Growers' Association, that after attaining eight years of age, it would be quite hardy; but was much disappointed at finding that Mr. Noe had no faith in his own statement, for, upon visiting Hermann last winter Mr. N. had his ten-year old vine PROTECTED WITH STRAW. The protection of the vine is simple, laying it down and covering with a few inches of earth was quite sufficient. Mr. Arnoldt has always seen the Herbemont grown in a cold grapery.

Mr. Allen knew the Catawba was in bad repute here; it was very liable to disease, but it was a fine fruit when it did succeed; he would not be without it, and he also thought the family garden should have an Isabella too.

The Secretary had tried the Hartford Prolific: it stood very high in his estimation; had no tendency to drop from the vine with him; had eaten them from the tenth of August till the fourth of November, and found them hang on well during all that time; the bunch and berry of fair size and the fruit good.

The Executive Committee presented "Sorghum Culture" as a subject for the next meeting. Adopted.

The President announced the next meeting to be held at the Allenton School House, on the first Thursday of February, at 10 A. M.

On motion the meeting adjourned.

WILLIAM MUIR, Sec.

The very best investment a farmer can make, is in fruit trees. If properly planted, they will thrive and grow, and produce golden harvests. They will enhance the value of the farm far more than any other investment of the same amount.

PRUNING THE PEACH.

ED. VALLEY FARMER: According to promise, I give you a brief exposition of the system of pruning the Peach adopted by the most extensive growers of this fruit in South Ill.

In the first place, the seedling stocks in the nursery should be budded as near the collar as they conveniently can be.

On being transplanted from the nursery into the orchard at the usual age (one season's growth from the bud), the young tree is cut back to a *mere stump*, only about ten inches long from the collar, and without any branches whatever. In this condition it is set out in permanent orchard form, and shortly after the young shoots appear they are all rubbed off except *four*, which are left as nearly opposite each other as possible—*i.e.*, on opposite sides of the stump—and all at the same hight as nearly as possible from the ground or collar. This gives the young tree a beautiful *distaff* appearance—and as all sprouts and branches in the centre are cut out yearly, the form of the tree is similar to an inverted umbrella, minus the handle. Once a year, during mild weather in winter, or early in spring, the ends of all the longer branches are cut back from one-third to one-half of the last year's growth.

For this system of pruning, the following advantages are claimed, viz: A splendid growth the first season, if properly cared for, mulched, etc. Giving the fruit a full exposure to the sun's rays, thereby securing a higher color, better flavor, earlier maturity, etc. Facilitates gathering the fruit, a ladder being unnecessary, as most of the fruit can be picked while standing on terra firma—and the remainder secured by stepping into the open or concave top, which is generally so open that a two bushel basket might be set down in the center of the tree.

The large orchards at Makanda, Ill., are pruned on the plan I have named, and present a beautiful appearance to the eye of a pomologist. There is such uniformity in the size and general appearance of the trees, that they resemble each other almost as closely as would a number of grains of corn, of one variety, arranged in rows on a table.

In setting an orchard, the soil is thoroughly and deeply plowed, and then furrowed out, as for corn, the furrows being at the distance apart at which the trees are to be set. The trees are then set at the crossings of the furrows, and if the soil is in good order, no tools are needed other than those indispensable appendages—the hands.

Mr. Evans, of Makanda, I am told, set his entire orchard of about 6,000 trees with his hands, without spade or hoe, having no guide in setting but the furrows. The branches of most of his trees are so low that they can be pressed down upon the ground without breaking.

Anna, Ill., Jan. 6, 1862. A. BABCOCK.

[Written for the Valley Farmer.]

RALPH HOYT.

Ralph Hoyt is the landscape painter among our poets; not in the sense of Bryant or Wordsworth, or even Thomson—more like Cowper; but distinct from all. Perhaps he is more nearly related to Alice Carey in that writer's prose sketches. He has a nook by himself, and that near the domicile—for of all our writers he is the most domestic in his affections. Witness this:

"Old stone school-house!—it is still the same!
There's the very step I so oft mounted;
There's the window creaking in its frame,
And the notches that I cut and counted
For the game!

There, the rude three-cornered chestnut rails,
Round the pastures where the flocks were grazing,
Where, so sly, I used to watch for quails,
In the crops of buckwheat we were raising,
Traps and trails.

There's the mill that ground our yellow grain;
Pond and river still serenely flowing;
Cot, there nestling in the shaded lane,
Where the lily of my heart was blowing,
Mary Jane!"

This is plain—almost homely—and has the fidelity of a Dutch picture. Our poet is Dutch in his instincts: he has the manner and sympathies of a true German. His sentiment is pure and tender.

"It was summer, and we went to school."

This line alone is sufficient to establish this, though employed only in narrating. It is as fluent as music itself—indistinctly conveying a plaint.

Much has been written by this poet, though he has acknowledged but little; and more might have been spared from his thin volume. Like Byron, while writing his "Hours of Idleness," he wrote without knowing he was only writing verse, not poetry, till he struck the true vein in his nature, and gave us *himself*, in genuine homespun. This he has happily done in a description of a winter's morning after a fall of snow during the night. Such stanzas as these appear in it:

"The drifts are hanging by the sill,
The eaves, the door;
The haystack has become a hill;
All covered o'er
The wagon, loaded for the mill
The eve before.

Maria brings the water pail—
But where's the well!
Like magic of a fairy tale,
Most strange to tell,
All vanished—curb, and crank and rail;
How deep it fell!

The wood-pile too is playing hide—
The axe—the log—
The kennel of that friend so tried
(The old watch-dog)—
The grindstone standing by its side—
All now INCOG.

Now sings the kettle o'er the blaze;
The buckwheat heaps;
Rare Mocha, worth an Arab's praise,
Sweet Susan steeps;
The old round stand her nod obeys,
And out it leaps.

To delve his threshing, John must hie;
His sturdy shoe
Can all the subtle damp defy:
How wades he through!
While dainty milk-maids, slow and shy,
His track pursue."

But the best stanza of all is this:

"Good Ruth has called the younker folk
To dress below;
Full welcome was the word she spoke—
Down, down, they go;
The cottage quietude is broke—
The snow! the snow!"

What a picture is this!—a mere dash of the pen as it were, all in one—a complete, homogeneous whole, without jar, without art (visible), without effort. It *flowed* from the poet's mind. Not only the execution is admirable, but the thought is poetical. By a mere touch, by only two words—

"The snow! the snow!"—

the substance of a whole sentence is given: it is nearly all left to be understood, not expressed. Instinct alone can guide to such execution. And how effective is the expression.

"Down, down, they go,"

is equally good—and so

"The cottage quietude is broke."

The popularity which this poem at once received, induced the author to continue the vein in "Old," a title as quaint as the poem itself, and his chief effort. This shows to best advantage his sympathy and talent. His genius is tender, full of pathos; and the images stand out as clear as the picture in nature—not indeed as any eye sees it, for it is the province of the poet to make objects but a medium through which sentiment is conveyed. The same object may serve another for directly opposite purposes. We know the misanthropic spell Byron sheds

upon nature. Instead of light—and in Hoyt the light of a tear—we have gloom—because Byron's was a gloomy mind. So Shakespeare is hearty, wholesome; Wordsworth pensive; Burns exuberant; Hoyt domestic. So also is Cowper. Thomson cannot so be distinguished; he gives us little of himself; we only have what bare nature presents. This is not poetry: it is not the true idea of poetry. It leaves a man to be his own poet when among such writers, as much so as when he walks out among the objects so described. This was the idea of the ancients. They simply presented us with a catalogue of rural objects. It is true their poets were not without emotion; but what distinctive sentiment distinguishes Theocratus? or even Virgil (in descriptions of nature). Homer had strength. It was the strength of simplicity, and his scene was colored by the nature or tone of the action. The honest amiability and quaintness of Izaak Walton, was an entity, a presence felt. What presence is there in all the ancient literature—what beyond the presence of passion in her pastorals? Ay! this: the light of our early tuition; this is the lens of enchantment, that invests all the productions, whether ancient or otherwise, with a charm that belongs not to them, but to us. We clothe the ancient landscape with our own fancies seen through the mellowing glass of time. *We* are the poet—not the Greek, nor the Roman. So it must always be; we must be poets to understand poetry; else how could we appreciate. Not practical, inventive poets; but possessing a capacity to receive, to respond. This capacity is not always the same in the individual. Hazlitt, our best poet-critic, says: "Man is a poetic animal: and those of us who do not study the principles of poetry, act upon them all our lives, like Moliere's *Bourgeois Gentilhomme*, who had always spoken prose without knowing it. The child is a poet, in fact, when he first plays at hide-and-seek, or repeats the story of Jack the Giant Killer; the shepherd-boy is a poet, when he first crowns his mistress with a garland of flowers; the countryman, when he stops to look at the rainbow; the city apprentice, when he gazes at the Lord-Mayor's show; the miser, when he hugs his gold; the courtier, when he builds his hopes upon a smile; the vain, the ambitious, the proud, the choleric man, the hero and the coward, the beggar and the king, the rich and the poor, the young and the old—all live in a world of their own making; and the poet does no more than describe what all the others think and act."

Ralph Hoyt is not a poet by profession (he is a clergyman)—not a poet of art, in the sense of Tennyson, though device is evident in the construction of his verse, which not always flows from the subject. Even in his best poems this is evident. He carries the trick of repetition to excess. To this he was probably emboldened by the success of "Old," his best poem, which repeats the first line of each stanza, sometimes with happy effect, but generally the repetition is useless and burdensome, and unheeded by the reader. And yet, such is the power of association in the presence of genius, that were the line omitted at the close of each stanza, it would mar the poem to ears accustomed to its music—for, though repeated, the line is not less musical in itself. It can be considered only as a refrain. Poe condemned it; and so have others. F.G.

[Written for the Valley Farmer.]

HOUSEWIFERY.

BY HETTIE HAYFIELD.

We shall not offend the "esprit du corps" of the wise ones of the world by dignifying this branch of human industry with the name of science; we will call it a system of knowledge of such duties of life as are usually yielded without dissent or demur by the lords of creation to the weaker vessels, women.

In this sphere there is some debateable ground—duties which may be performed by the master of the household without sully to his dignity, or be supervised by the mistress without subjecting her for a moment to the odious suspicion of belonging to that unfeminine order, yclept "woman's rights" advocates or claimants—for we belong to the "straitest sect" of those who believe that as far back as the halcyon days of Eden, God gave in the physical and mental organization of the sexes unmistakeable indications of their "manifest destiny" and duty. We therefore yield unreservedly, not only the pulpit and hustings, the cabinet and tented field to man, but also the fields that yield grass and grain "after their kind," with all the cattle that roam thereon, and all the toil, fame, and gain that come thereby. Farther, we declare that we take *Home* to be the centre, and well nigh the circumference, of a woman's duties and pleasures. And though we think every woman, at least every farmer's wife, should be competent to perform or direct (in meekness and modesty) her husband's business in case absence, sickness, or widowhood should devolve it on her; still, for the time she is thus employed, we consider her an unfortunate woman, whose shortcomings in her own department should

be looked on with charitable forbearance; for few women can extend their cares beyond their natural limits, without tell-tale effect on their children and their homes; and are indeed in danger of becoming one of those anomalous nondescript and unlovable beings, styled a "*mannish woman.*" I can therefore excite no surprise by declaring that I do not think she is greatest, who usurping the rostrum or pulpit, helps to keep up or prolong an unnatural war; nor she who sends out on the stream of time the most thrilling drama or deathless song; nor she who by outward adornment of her body or by witchery of manner draws in her train the greatest crowd of Fashion's devotees. But she is greatest who most fully performs all her duties, the humblest as well as the highest, in her own appropriate sphere. She who makes for her family the happiest home, and who leaves to the world a priceless legacy in the children she has fitted for faithful and efficient laborers in whatever part of the vineyard of life the master assigns them.

But to revert to housewifery. It of course ranks subordinate to the intellectual and moral duties of woman; but it is in a degree inseparable from them, being the basis and cement of the social superstructure. It is seemingly a round of almost manual duties; yet involves the exercise of all the higher faculties; and upon the successful execution of the plain duties of housewifery, depends much of the pleasure of society, the comfort of home, and in a good degree the character and respectability of families. An intelligent, well-tempered, well-bred, and useful person seldom springs from a home in which indolence, irregularity, and contempt of homely virtues prevail. True, a sense of deficiency, sometimes stimulates an ambitious spirit to overcome the lack of early education:—but, then, days that should be days of fruition are spent in learning what should have been the lessons of childhood from a kind mother, rather than from harsh experience and bitter mortification.

To succeed in housewifery your own habits must be good. Intelligence, industry, patience, and a host of other virtues must be your body-guard of angels. You must understand fully what you have to do or direct. If you have not had a home education in the business, your best aids are in reliable books. They allow you to stay at home, and require no reciprocity for service rendered. They give brief, explicit directions—do not weary in being often asked—never sneer at your ignorance or laugh at your failures. Reflect much, observe carefully, and keep memoranda of your observations. Never be too proud, at suitable times, to ask of the lowliest, information. Take papers bearing on practical life, and preserve in convenient form fugitive recipes from newspapers usually devoted to destruction.

You must be industrious, an early riser, if you mean to drive instead of letting your business drive you. Let your industry consist rather in diligent managing, supervising, teaching, and helping when *absolutely necessary*, than in steadily working yourself. If you must work steadily, resolutely yourself at some one thing, give up at once the ideal of a model house, garden, or children. "Ye cannot serve God and Mammon," was not only a high spiritual lesson, but capable of adaptation to the every-day affairs of life. Ye cannot do two things at once, however well disciplined your household may be. Your presence and direction will be too often needed at different points to allow you except in emergencies to take hold of any job that will require much time and must be finished at a given date. Necessity knows no master or mistress either, but, if you can possibly afford it, give the work that would devolve on you to some one to whom employment is best charity, or keep a seamstress or sewing machine.

Take the spare hours which good management will secure you every day for a little ornamental work, while you enjoy the society of your family; or, better still, when alone, in reading, to keep pace with the world's advance in knowledge. You will need this to meet your children's frequent checks on your fund of information, or for exchange with your brisk husband, who will otherwise be calling you "mother," and seeking company elsewhere, to read with him his favorite hobbies, or keep his blood in wholesome circulation by combatting his favorite dogmas.

Finally, you must practice your indispensable virtues *habitually*. If you allow your house to become untidy, your children and servants to have uncleanly personal habits; if you use yourself inelegant language, or allow in your family slang and coarse expressions — things will not be righted magically by the announcement that "company is coming." Remember, the moral of the old fable of the cat that was turned to a princess, but who continually betrayed herself by showing her teeth and claws whenever a mouse appeared.

So the sound of hurrying footsteps, dust unsettled from recent sweeping, clean aprons over

dirty dresses, little fingers dipping into dishes, will all betray your daily habits. If you cannot (which is not desirable) wear fine clothes and fare sumptuously every day, you can be tidy; have your food well cooked and properly served.

And if you cultivate affectionate habits in your family, and keep with them as intelligent and respectful an intercourse as with the most honored strangers, you may be sure you are pursuing the right course to make them happy, useful, and respectable members of society.

TO THE SUNBEAM.

Thou art no lingerer in monarch's hall;—
A joy thou art, and a wealth to all!
A bearer of hope upon land and sea—
Sunbeam! what gift hath the world like thee?

Thou art walking the billows, and ocean smiles—
Thou hast touched with glory his thousand isles—
Thou hast lit up the ships and the feathery foam,
And gladdened the sailor like words from home.

To the solemn depths of the forest shades,
Thou art streaming on through their green arcades;
And the quivering leaves that have caught thy glow,
Like fire-flies glance to the pools below.

I looked on the mountains—a vapor lay,
Folding their heights in its dark array;—
Thou brokest forth—and the mist became
A crown and a mantle of living flame.

I looked on the peasant's lowly cot—
Something of sadness had wrapped the spot;
But the gleam of thee on its casement fell,
And it laughed into beauty at that bright spell.

To the earth's wild place a guest thou art,
Flushing the waste like the rose's heart;
And thou scornest not from thy pomp to shed
A tender light on the ruin's head.

Thou takest through the dim church aisles thy way,
And its pillars from twilight flash forth to-day;
And its high pale tombs, with their trophies old,
Are bathed in a flood as of burning gold.

And thou turnest not from the humblest grave,
Where a flower to the sighing winds may wave;
Thou scatterest its gloom like the gleams of rest,
Thou sleepest in love on its grassy breast.

Sunbeam of summer! oh, what is like thee?
Hope of the wilderness, joy of the sea!
One thing is like thee, to mortals given—
The Faith touching all things with hues of heaven.
—[Mrs. Hemans.

Character is Power.—It is often said that knowledge is power—and this is true. Skill or faculty of any kind carries with it superiority. So, to a certain extent, wealth is power, and rank is power, and intellect is power, and genius has a transcendant gift of mastery over man.—But higher, purer, and better than all, more constant in its influence, more lasting in its sway, is the power of character—that power which emanates from a pure and lofty mind.—Take any community, who is the man of most influence? To whom do all look up with reference! Not the smartest man, nor the cleverest politician, nor the most brilliant talker, but he who in a long course of years, tried by the extremes of prosperity and adversity, has approved himself to the judgment of his neighbors and of all who have seen his life, as worthy to be called wise and good.

Happiness not in Circumstances.—Some men ascribe all their unhappiness to the narrowness of their means; but place them in the immediate enjoyment of all that enters within the circle of their present hopes and desires, and they will no sooner have entered on the enrapturing possession than new hopes and desires will begin to manifest themselves. You cannot place a man in such a situation that he will not look above it and beyond it; give him the whole of this world, and like the hero of Macedon, he will inquire for another.

Good Advice.—A certain khan of Tartary, traveling with his nobles, was met by a dervis, who cried, with a loud voice, "Whoever will give me a hundred pieces of gold, I will give him a piece of advice." The khan ordered the sum to be given to him, upon which the dervis said, "*Begin nothing of which thou hast not well considered the end.*" The courtiers, hearing this plain sentence, smiled, and said, with a sneer, "The dervis is well paid for his maxim." But the khan was so well pleased with the answer, that he ordered it to be written in golden letters in several parts of his palace, and engraved on all his plate.

Not long after, the khan's surgeon was bribed to kill him with a poisoned lancet, at the time he bled him. One day, when the khan's arm was bound, and the fatal lancet in the hand of the surgeon, the latter read on the basin, "*Begin nothing of which thou hast not well considered the end.*" He immediately started, and let the lancet fall out of his hand. The khan, observing his confusion, inquired the reason; the surgeon fell prostrate, confessed the whole affair, and was pardoned; but the conspirators were put to death. The khan, turning to his courtiers, who had heard the advice with disdain, told them that the counsel could not be too highly valued which had saved a khan's life.

Time is the cradle of hope, but the grave of ambition; the salutary counselor of the wise, but the stern corrector of fools. Wisdom walks before it, opportunity with it, and repentance behind it. He that has made it his friend, will have little to fear from his enemies; but he that has made it his enemy, will have but little to hope from his friends.

True worth and excellence of nature is seldom recognized by the world, unless attended by the pomp and glitter of position and possessions.—Surroundings common to error and poverty seem to convey the thoughts of want of worth. The world seems to forget the noblest part of one's nature in the outer vestments.

Hope writes the poetry of the boy, memory of man. Man looks forward with smiles, but backward with sighs. Such is the wise providence of God. The cup of life is sweetest at the brim, the flavor is impaired as we drink deeper, and the dregs are made bitter that we may not struggle when it is taken from our lip.

Editor's Table.

Premiums for New Subscribers.

Having obtained a supply of Tennessee Upland Cotton Seed, we make the following proposition:

Any one remitting One Dollar for the "Valley Farmer" for 1862, shall have, in addition to that Journal, TWO QUARTS OF THE SEED (FREE)—enough to plant over half an acre of ground. Any one forming a Club of Five Subscribers, and remitting Five Dollars, shall have in addition to two quarts for each subscriber, ONE PECK of seed. Any one forming a Club of Ten Subscribers, and remitting Ten Dollars, shall have in addition to two quarts for each, ONE BUSHEL of seed—enough to plant, with proper care, eight or ten acres.

The Cotton Seed will be put up in suitable sacks, and delivered at any Express Office, or other place, in St. Louis, free of charge. Clubs are preferred, as the seed can all be sent in one package to the getter up of the Club, making the expense of transportation but a trifle to each. Persons wishing larger quantities, can be supplied at one dollar and fifty cents per peck, or four dollars per bushel.

The Tennessee Upland Cotton Seed has been frequently planted in Missouri and Illinois, and so far as we can learn with good returns. It is undoubtedly far preferable for the inland States, to the Sea Island Cotton, or to any that can be obtained from the sea coast.

Those wishing to try the plant, can have the opportunity without expense, as we hesitate not to say that every farmer will get more than the worth of his dollar out of the "Valley Farmer" during the year, besides the seed.

Raw Cotton now commands from 30 to 40 cents a pound; and if the war continues much longer, we shall have to go to carding our cotton by hand, and manufacturing our domestic fabrics at home, as our mothers did before us.

Our old friends who have stood by us so long and so faithfully, and who have already renewed their subscriptions, will confer an especial favor by forming Clubs, and thus get a liberal supply of seed for their own use or for distribution among their friends.

Coffee Growing in Illinois.

We learn that Mr. George R. Hoffman, of Effingham county, Illinois, in latitude north of St. Louis, raised the past year over TWO BUSHELS OF COFFEE. It very nearly resembles the Rio coffee. He obtained the seed from Australia some three years ago. It produced no seed the first year, bore a very little the second, and was quite productive the third year. Of course, the older the plant becomes the more it will produce. Mr. Hoffman estimates that thirty bushels can be grown per acre. We wish a few thousand acres in Illinois had produced this amount the past season. It would reduce the price of this favorite beverage.

We fear the plant will not succeed, as it is now hoped it will. We doubt its being entirely hardy.—And further we doubt whether our climate will give the berry that rich and agreeable aroma so peculiar to coffee. Thus far the plant seems to be hardy and perfectly at home in Illinois soil, and it is said the flavor of the berry is quite as good as that which comes from afar.

Illinois is raising Sorghum syrup and sugar, and now proposes to raise her own cotton, tobacco, and coffee. Great State! We wish her success.

The Mo. Fruit Growers' Association.

This Society convened in St. Louis on the 14th of January, and held a very interesting and profitable session of four days and evenings.

By some cause, that part of the proceedings intended for this number did not arrive in time to be published. We shall, however, commence with our next issue the publication of these proceedings, and they will be found valuable to all who are interested in fruit culture. Indeed they will be worth far more to every reader than the cost of the subscription to this journal for one year.

Fifty Dollars in Premiums, for Essays on the Culture of Flax and Castor Beans.

We take pleasure in calling attention to a Circular from the Collier and O'Fallon White Lead and Oil Companies, which will be found in this issue, offering liberal Premiums for the best and most reliable information that may be furnished, previous to the 22d of February, on the cultivation of Flax Seed and Castor Beans.

The importance of this matter will be readily appreciated by all persons interested in the development of our own abundant resources, and in retaining at home upwards of five millions of dollars annually, which is expended for Flax Seed, Castor Beans, Castor Oil, and Linseed Oil, of foreign production. There has been no time during the past five years when Flax Seed and Castor Beans would not have paid the farmer a handsome profit on the cost of production; and from the best data now at hand we believe the present ruling prices, as well as the probable future prices, will afford the producer a better return for his expenditure than almost any other product of which the fertile lands of the Great West are capable.

We are assured by persons who have been engaged in the business for many years, that they have always been able to convert their Flax Seed and Castor Beans into cash more readily than any other crop; and now that a heavy duty is imposed on foreign Flax Seed, Castor Beans, as well as the oils expressed from them, we see no good reason why the farmers of Ohio, Kentucky, Indiana, Illinois, Michigan, Wisconsin, Iowa and Missouri, should not produce enough to supply the oil mills within their own borders, as well as the oil mills of the East, to the mutual advantage of both sections, and at an annual saving to the country of nearly six millions of dollars.

Flax Seed and Castor Beans.

The undersigned having a large capital invested in buildings, machinery, and fixtures, especially adapted for the manufacture of Oil from Flax Seed and Castor Beans, and believing that their own as well as the farmers' interests will be promoted by publishing the best information that can be obtained with regard to the cultivation of the same, hereby offer a PREMIUM OF TWENTY-FIVE DOLLARS for the best article on the cultivation of FLAX SEED; also a PREMIUM OF TWENTY-FIVE DOLLARS for the best article which may be contributed previous to the 22d of February, on the cultivation of CASTOR BEANS. A Committee of Three competent gentlemen will be appointed to examine all communications furnished, and the above mentioned Premiums will be paid in cash to the person or persons who, in the opinion of the Committee, may contribute the BEST and MOST RELIABLE information.

We would advise all persons who have flax seed or castor beans, of good quality, to retain the same, with the view of supplying farmers who may wish to undertake their cultivation, as we confidently believe that all now in the hands of farmers or country merchants will be wanted for seed. We shall continue to receive all that may be sent to this market of GOOD QUALITY, at $1.50 per bushel (for either flax seed or castor beans), for the express purpose of supplying farmers who are unable to get seed from their neighbors.

All communications regarding the cultivation of Flax Seed and Castor Beans, may be addressed to Geo. W. Banker, President O'Fallon White Lead and Oil Company, St. Louis, Mo.

COLLIER W. L. & O. CO.,
Per THOMAS RICHESON, Sec.
O'FALLON W. L. & O. CO.
Per GEO. W. BANKER, Pres.

St. Louis, Jan. 25, 1862.

ILLINOIS HORTICULTURAL SOCIETY.—The members of this Society have recently held a very interesting and profitable meeting at Chicago. They were welcomed to the city by Chas. D. Bragdon, Esq., President of the Chicago Gardeners' Society, when the President, the "Old Doctor," John A. Kennicott, delivered one of his sensible talks to the association. The meeting was largely attended, and we shall try to find space for the substance of the proceedings in future numbers of the "Valley Farmer."

Singer's Sewing Machine.

Will you allow me to explain why I have been unable, for several months, to supply Singer & Co.'s Patent Sewing Machines as fast as required.

When the halls were opened for the manufacture of Clothing for the Army, it was discovered that this machine was far superior to any other for the purpose, and consequently an unexpected demand was created, that Singer & Co. could not meet—but having increased their facilities for production, they are now able to assure me that for the future I will be supplied in such quantity that all in need of the BEST SEWING MACHINE EXTANT, can be immediately supplied, and at a price and on terms that places it within the power of even the poorest to purchase.

EDWIN DEAN, AGENT,
For Singer's Sewing Machines, 85 Fourth St.

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